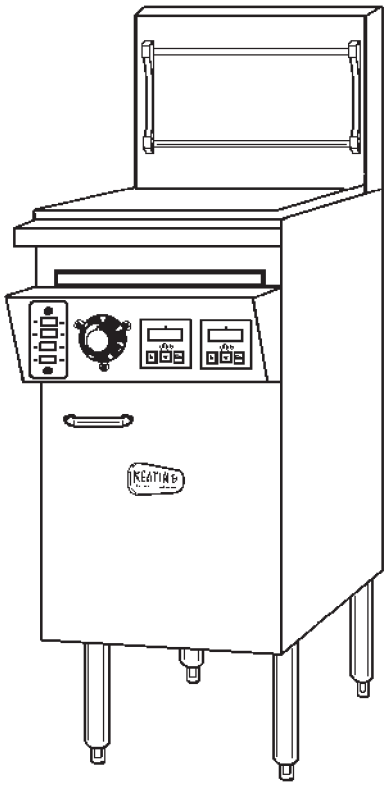
KEATING
OF CHICAGO, INC.®

# INSTANT RECOVERY® GAS FRYER SERVICE MANUAL



**KEEP THIS MANUAL FOR TRAINING NEW PERSONNEL**

1-800-KEATING
www.keatingofchicago.com

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# POST THIS LABEL IN A PROMINENT LOCATION ON YOUR UNIT

**IMPORTANT**

**IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUT OFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.**

**FOR YOUR SAFETY**

**DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

**WARNING**

**IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.**

# I INTRODUCTION

## SAFETY PRECAUTIONS

**WARNING**

**THIS SYMBOL WARNS YOU THAT SERIOUS BURNS OR OTHER INJURIES MAY RESULT IF SAFETY INSTRUCTIONS ARE NOT FOLLOWED.**

- This service manual should be retained in a safe place for future reference. The installation of your new fryer must conform to local codes or in the absence of local codes, with the current National Fuel Gas Code ANSI Z223.1/NFPA 54, Natural Gas Installation Code CAN/CGA-B149.1 or Propane Installation Code CAN/CGA-B149.2.
- Your ventilation hood, when installed, must conform to the current ANSI/NFPA 96 standard.
- No frame or restriction shall be constructed around the fryer that will restrict air movement into the fryer's combustion area or prevent proper ventilation.
- Keating fryers are designed to operate on the gas fuel specified on the serial plate (attached to the inside of the door of the fryer) and must not be operated with another gas fuel. They cannot be converted to another gas fuel by turning or engaging a switch.

**FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any appliance.**

You will post, in a prominent location, instructions to be followed in the event the user smells gas. This information shall be obtained from your local gas supplier. You may use the yellow stick-on label temporarily until you receive the data from your local gas supplier.

**IMPORTANT:** In the event a gas odor is detected, shut down unit at main shut-off valve and contact the local gas company or gas supplier for emergency service.

- You must maintain this appliance free and clear from combustibles.
- You must maintain the following minimum clearances from combustible and noncombustible construction:

| | Clearances | |
|---|---|---|
| | Combustible Construction | Noncombustible Construction |
| Back | 6” | 0” |
| Right Side | 6” | 0” |
| Left Side | 6” | 0” |

- You must install this appliance at least 16 inches away from any open flame.
- Adequate clearance for servicing and proper operation must be maintained. Your fryer is designed to be serviced from the front.
- Keating commercial fryers are intended for other than household use.
- ALWAYS instruct new employees on proper fryer operation.
- A fryer should be operated ONLY by properly trained personnel.
- ALWAYS turn fryer off each night.
- ALWAYS disconnect fuel source before servicing.
- NEVER leave a fryer unattended during operation.
- NEVER move a fryer when full of hot oil.
- NEVER introduce objects or liquids into fryer, while operational, which are not designed or made for cooking.
- THIS FRYER MAY NOT BE ALTERED, MODIFIED OR CHANGED IN ANY WAY.

The State of California enacted the California Safe drinking water and Toxic Enforcement Act of 1986, (Prop. 65), which “prohibits any person in the course of doing business from knowingly and intentionally exposing any individual to a chemical known to the State of California to cause cancer or reproductive toxicity without first giving clear and reasonable warning to such individuals.” The Governor's Scientific Advisory Panel added carbon monoxide to the list of hazardous chemicals known to cause reproductive harm.

In order to establish full compliance with Proposition 65, we attached a yellow warning label to each gas fired fryer manufactured by Keating of Chicago, Inc.

Carbon monoxide would not be present in concentrations that would pose a “significant risk” to the consumer when the equipment is installed, operated and maintained as follows:

- Installed in accordance with all local codes, or in the absence of local codes, with the current National Fuel Gas Code Z223.1/NFPA 54, Natural Gas Installation CAN/CGA-B149.1 or Propane Installation Code CAN/CGA-B149.2
- Installed under a properly designed operating exhaust hood.
- Connected to the type of gas for which the fryer is manufactured.
- Pressure regulator installed in the appliance is adjusted for the manifold pressure marked on the serial plate.
- Adequate air supply to the fryer.
- In-line pressure regulator, not supplied by Keating, must be installed outside the appliance (when needed to maintain the specificied manifold pressure marked on the serial plate).
- The equipment is operated in the manner intended using the proper utensils.
- Keep the equipment clean and have it checked periodically.
- Burner air adjustments, mechanical maintenance and repairs must be performed by qualified service personnel.

If the equipment is not installed, operated and maintained in accordance with the above, concentrations of carbon monoxide in excess of the established limits could be present in the kitchen environment.

ALL PERSONNEL IN THE WORK PLACE WHO MAY BE SUBJECT TO ANY EXPOSURE OF CARBON MONOXIDE MUST BE WARNED OF SUCH POSSIBLE EXPOSURE. THIS WARNING SHOULD BE CONVEYED IN A MANNER SO THAT IT IS CLEARLY UNDERSTOOD BY THE EMPLOYEE, AND THE EMPLOYEE SHOULD BE ASKED IF IN FACT HE OR SHE UNDERSTANDS THE CORRECT METHOD OF OPERATION OF THE EQUIPMENT AND THAT A RISK OF EXPOSURE EXISTS IF THE EQUIPMENT IS OPERATED IMPROPERLY.

**WARNING**

**IF NOT INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, THIS PRODUCT COULD EXPOSE YOU TO SUBSTANCES IN FUEL OR IN FUEL COMBUSTION WHICH CAN CAUSE DEATH OR SERIOUS ILLNESS AND WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.**

# II INSTALLATION

This fryer MUST be installed, inspected, calibrated and serviced by qualified and/or certified and/or licensed service personnel – you may void your Keating warranty if installation is not completed per current local, national and Keating specifications. Contact your dealer for assistance.

## DAMAGE DURING SHIPMENT

The fryer has been assembled, tested and inspected at the factory. Upon arrival, the complete fryer should be checked for any damage that may have occurred during shipment.

The carrier is responsible for all damage in transit whether visible or concealed. Do not pay for the freight bill until the fryer has been thoroughly checked for damage. If concealed damage is found later, contact the carrier immediately to file a claim.

**What to do if equipment arrives damaged:**

VISIBLE LOSS OR DAMAGE—Be certain to note this on the freight or express receipt and have it signed by the delivery person.

FILE CLAIM FOR DAMAGES IMMEDIATELY – Regardless of extent of damage.

CONCEALED LOSS OR DAMAGE—If damage is noticed when equipment is unpacked, notify the freight company immediately, and file a "concealed damage claim". This MUST be done immediately. Be sure to retain the shipping container for inspection.

Keating does not assume responsibility for Loss OR Damage incurred in transit.

## INSTALLATION

Installation must conform with local codes or, in absence of local codes, with the current National Fuel Gas Code Z223.1/NFPA 54, Natural Gas Installation CAN/CGA–B149.1 or Propane Installation Code CAN/CGA-B149.2.

## POSITIONING

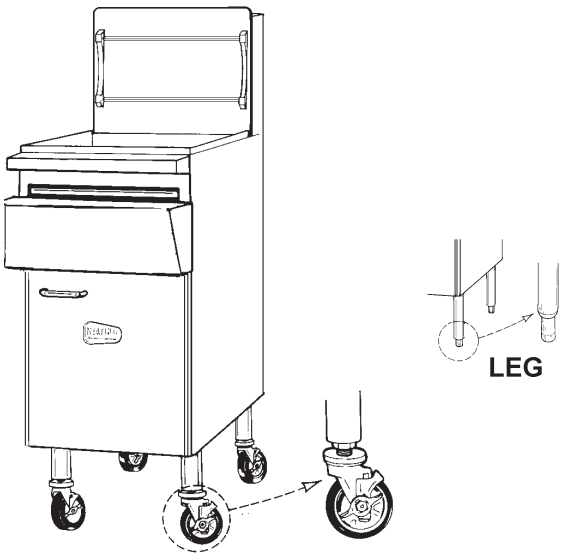
The fryer must be no closer than 6 inches from any combustible material and 16 inches away from any open flame. The fryer must be placed under an exhaust hood with a fire retardant system. Your ventilation hood, when installed, must conform to the current ANSI/NFPA 96 standard. **ALL** connections and placement must comply with local and national codes. It is the responsibility of the owner and local installer to comply with these regulations when installing the fryer.

Counter model and floor model fryers **must be restrained to prevent tipping** when installed in order to avoid splashing, spilling, etc. of hot liquid. The restraining method may be a manner of installation or by separate means.

## LEVELING

The fryer will operate at its highest efficiency when properly leveled. Place a level on fryer vessel from side to side. For fryers on legs, the bottom foot of the leg is adjustable. Turn counter clockwise to decrease height or clockwise to increase height until level. For fryers on casters, the casters are adjustable by loosening the jam nut and turning the caster in or out. When the desired level is reached, tighten the jam nut. Adjustments of more than 3/4" are not recommended on any caster. The same procedure should be followed to level the fryer from front to back.

**Figure 2-1**




## RESTRAINING DEVICES

On fryer installations with casters, casters and jam nuts must be completely tightened. Adequate means must also be provided to limit the movement of the appliance without depending on the connector, the quick-disconnect device or its associated piping to limit the appliance movement.

Connectors must comply with the current ANSI Z21.69/CAN 1 CAN/CGA 6.16 standard for connectors for movable gas appliances. Quick-disconnect devices must comply with the current ANSI Z21.41/CAN 1 6.9 standard for quick-disconnect devices for use with gas fuel as applicable.

**WARNING**

**IF DISCONNECTION OF THE RESTRAINT IS NECESSARY, IT MUST BE RECONNECTED WHEN THE FRYER IS RETURNED TO ITS ORIGINALLY INSTALLED POSITION.**

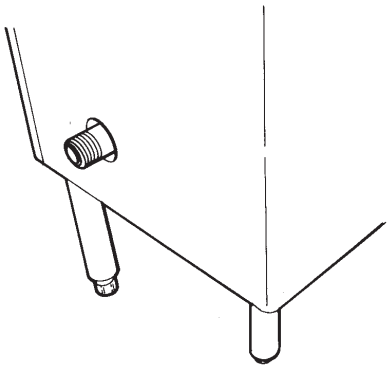
## GAS CONNECTION

**WARNING**

- **PIPE JOINT COMPOUNDS RESISTANT TO PROPANE GASES MUST BE USED.**
- **BEFORE OPERATING THIS FRYER, CHECK PIPE JOINTS FOR LEAKS BY USING A SOAP AND WATER SOLUTION ONLY. DO NOT USE AN OPEN FLAME!**
- **ON AN AA OR CMG (MILLIVOLT) FRYER, DO NOT SHORT GAS VALVE TERMINALS WHEN TESTING WIRING AS THERMOSTAT AND GAS VALVE DAMAGE MAY OCCUR AND CAUSE UNSAFE CONDITIONS.**

**Figure 2-3**

**Main Gas Connection (14TS Model)**



**FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

You will post, in a prominent location, instructions to be followed in the event the user smells gas. This information shall be obtained from your local gas supplier. You may use the yellow stick-on label enclosed on page "i" temporarily until you receive the data from your local gas supplier.

Connect the fryer to the main gas supply line at the rear of the fryer. The piping should be a minimum of 3/4" IPS supply pipe for a single fryer. Batteries require larger supply lines. Installation must conform with local codes, or in the absence of local codes, with the current National Fuel Gas Code ANSI Z223.1/NFPA 54, Natural Gas Installation Code CAN/CGA-B149.1 or Propane Installation Code CAN/CGA-B149.2.

A 3/4" NPT manual gas valve is factory installed with each floor model fryer (for single fryers and batteries), except for 10x11AA – 20AA models which use a 1/2" NPT valve. The required gas pressure for proper operation of each fryer is 4" water column for natural gas and 10" water column for Propane gas at the burner manifold. Remove the allen head test plug on the gas manifold and use a manometer to check the gas pressure.

In-line pressure regulators are not supplied by Keating. They are to be provided and installed by others as directed by local codes.

**NOTE:** If more than one gas fryer is on the same supply line, you may require a larger line. Consult your local gas company to assure adequate volume and pressure. Refer to serial plate for proper gas requirements for your particular model.

### ELECTRICAL CONNECTION

The Keating Instant Recovery® Gas fryer is equipped with a 9' neoprene covered, 3 wire electrical cord with a three-pronged grounded plug for protection against electrical shock. This plug must be placed into a 120V properly grounded three-pronged outlet (NEMA 5-15 or 5-20). For proper grounding procedures see local codes or, in the absence of local codes, the current National Electrical Code ANSI/NFPA 70 or Canadian Electrical Code CAN 22.2 as applicable.

**NOTE:** AA and CMG Models do not require any outside electrical connections.

**NOTE:** The electrical wiring diagram for the fryer is attached to the inside of the fryer door and to the inside of this manual.

**WARNING**

**DO NOT CUT OR REMOVE THE GROUNDING PRONG FROM THIS PLUG.**

### GAS LEAK TESTING

Prior to lighting your fryer:

1. Make sure all thermostats, switches and safety valves are in the "OFF" position.
2. Turn main On/Off manual gas valve to the "ON" position.
3. Have your plumber or gas company check for leaks with a soap solution or sniffer. (NEVER check with an open flame!)
4. Have your plumber or gas company representative light the constant pilot. (Not necessary if your fryer has an optional spark ignitor.)

**NOTE:** It is estimated that half of all service calls made on Keating Instant Recovery® Gas fryers result from an inadequate gas supply. During installation, have a gas company representative make certain that the fryer is receiving adequate gas pressure and volume.

**WARNING**

**PROPANE GAS MAY EVENTUALLY LOSE ITS ODOR AND PRECAUTIONS SHOULD BE TAKEN TO ASSURE THAT IT IS NOT PRESENT EVEN THOUGH YOU DO NOT DETECT AN ODOR. IF THERE IS ANY DOUBT, YOU SHOULD CALL YOUR LOCAL PROPANE GAS SUPPLIER FOR ASSISTANCE.**

# III OPERATING

### FILLING

**NOTE:** Before filling the fryer make certain the fryer vessel is sanitized, dry and the drain valve is completely closed. See figure 3-4 on page 7 for location of drain valve.

**CAUTION:** We recommend that solid shortening not be used in AA and CMG Model fryers as they are not equipped with a melt cycle. If solid shortening is used, it should be melted prior to filling the fryer vessel. Damage done by melting solid shortening in the fryer vessel will void the warranty.

**WARNING**

**BE SURE THE HEAT TRANSFER TUBES ARE COMPLETELY COVERED WITH OIL BEFORE SWITCHING THE FRYER ON. IF OIL LEVEL DROPS BELOW TOP OF HEAT TRANSFER TUBES, SEVERE DAMAGE TO FRYER AND INJURY TO OPERATOR MAY RESULT!**

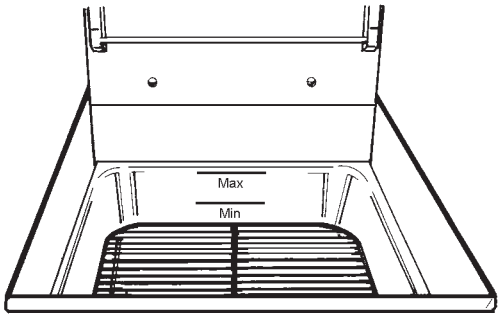
**WARNING**

**WATER (IN ANY FORM) AND HOT OIL DON'T MIX!!!**

**CAUTION:** Oil expands when heated. The “Fill Level” line has been provided to ensure optimum cooking while ensuring the safety of the operator. Do not overfill the fryer vessel.

**Figure 3-1**

**Fill Level Line**




### A. AA and CMG Models

1. Fill the fryer vessel with oil or MELTED solid shortening up to the “Fill Level” line.

### B. BB, TS, CPU and Basket-Lift Models

1. Fill the fryer vessel with oil up to “Fill Level” line. (See Figure 3-1).
2. If solid shortening is used, remove screen and firmly pack solid shortening between the heat transfer tubes. After this has been done and the fryer has been lit, proceed to melting instructions (Page 6) for use of the melt cycle.

## LIGHTING

**WARNING**

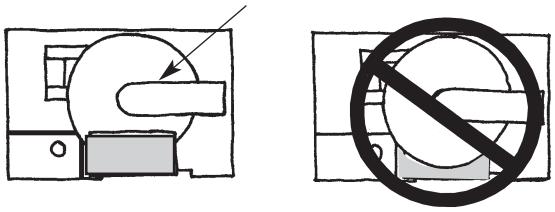
**BEFORE ATTEMPTING TO LIGHT THE FRYER, MAKE SURE THE GAS CONNECTIONS ARE SECURE AND HAVE BEEN LEAK TESTED AND THE FRYER HAS BEEN PROPERLY FILLED WITH OIL.**

**NOTE:** For safety purposes, all Hi-Limit controls are manually reset. Always check the Hi-Limit reset button before attempting to use the fryer. If the Hi-Limit has tripped, the fryer will not operate. (Located behind the fryer door underneath the front panel).

**NOTE**: For a fryer with a Central or Zero-Space™ Filter, always check the rear drain operating handle before attempting to use the fryer. A safety switch prevents the fryer from operating if the handle is not pushed in completely and latched. (See figure 3-2)

**Figure 3-2**

**Rear Drain Operating Handle**



### A. AA and CMG Models

1. Open the main gas supply to unit (usually at rear) by turning handle in-line with gas piping or hose. Also open manual valve (red gas cock) on gas piping inside unit where applicable.
2. Light the constant pilot (located near far left burner) with a match.
3. Set the On/Off switch to the “ON” position.
4. Rotate the tan gas valve knob to the “PILOT” position.
5. Push in knob and the constant pilot will ignite the runner pilot tube. Hold the knob for 45 seconds and release slowly. If the runner pilot tube fails to stay lit, wait five minutes before attempting to re-light to allow any accumulated gas to escape.
6. After runner pilot tube stays lit, release knob and rotate it to the “ON” position.
7. Set thermostat to desired temperature (325°F - 335°F).

### B. BB, TS, CPU and Basket-Lift Models

1. Open main gas supply to unit. Open manual valve (red gas cock) on piping inside unit where applicable.
2. Light the constant pilot (located near far left burner) with a match. If your fryer has an optional spark ignitor, omit this step.
3. Turn on main power On/Off switch to the “ON” position.
4. Set the Fry/Off/Melt switch (BB model) or Cook/Idle/Melt switch (TS and Basket-Lift models) to the “OFF” (BB) or “IDLE” (TS and Basket-Lift) position.
5. Activate pilot light momentary switch (for runner pilot) and hold about 30 seconds, releasing it after pilot indicating light is illuminated. If the runner pilot tube fails to stay lit, wait 5 minutes before attempting to re-light to allow any accumulated gas to escape.
6. Set the Fry/Off/Melt switch (BB model) or Cook/Idle/Melt switch (TS and Basket-Lift models) to the “FRY” (BB) or “COOK” (TS and Basket-Lift) position.

7. Set the thermostat to the desired temperature (325°F - 335°F).

## MELTING

The Keating Melt Cycle safely melts solid shortening in the fryer vessel without scorching.

**WARNING**

**BEFORE ATTEMPTING TO USE THE FRYER, MAKE SURE THE FRYER HAS BEEN PROPERLY FILLED WITH OIL.**

### A. BB, TS and Basket-Lift Models

1. Set the thermostat to the desired frying temperature (325°F - 335°F).
2. If using solid shortening, set the Fry/Off/Melt switch (BB Model) or Cook/Idle/Melt switch (TS and Basket-Lift Models) to the “MELT” position. Stay in the “MELT” cycle until the shortening has melted completely and is at the “Fill Level” line before switching to the “FRY” (BB Model) or “COOK” (TS and Basket-Lift Models) position for cooking.

### B. CPU Model

See separate fryer instructions or call 1-800-KEATING.

**NOTE:** During the “MELT” cycle, the burners are on for approximately 5 seconds and off for approximately 55 seconds.

**WARNING**

**BE SURE THE HEAT TRANSFER TUBES ARE COMPLETELY COVERED WITH MELTED SHORTENING BEFORE ATTEMPTING TO FRY. IF THE TUBES ARE NOT COMPLETELY COVERED WITH MELTED SHORTENING, SEVERE DAMAGE TO FRYER AND INJURY TO OPERATOR MAY RESULT.**

## COOKING

Keating Instant Recovery® Gas Fryers are designed to provide maximum production efficiency and deliver high quality food products. Low-temperature cooking, highly polished stainless steel and a true COLD ZONE mean extended oil life. Follow cooking procedures for your model.

**WARNING**

- **OPERATION OF THIS FRYER SHOULD BE LIMITED TO PERSONNEL WHO HAVE BEEN THOROUGHLY TRAINED IN OPERATING PROCEDURES.**
- **USE ONLY KEATING APPROVED BASKETS IN YOUR FRYER. NEVER OVERFILL FRY BASKETS. DO NOT BANG BASKETS ON BASKET HANGERS OR FRYER VESSEL.**
- **CARE SHOULD BE TAKEN WHEN LOWERING BASKETS INTO FRYER TO PREVENT SPLASHING HOT OIL FROM FRYER VESSEL.**
- **NEVER LIFT BASKETS DIRECTLY OUT OF THE FRYER VESSEL WITHOUT DRAINING AS SEVERE INJURY MAY RESULT.**

### A. AA, CMG and BB Models

1. Fill fryer as described on page 4 – Filling.
2. Set thermostat to the desired frying temperature (between 325°F - 335°F).
3. When the oil reaches the desired frying temperature, lower filled basket(s) slowly into the hot oil.
4. When cooking cycle is complete, carefully lift basket(s) out of oil and place them on basket hanger rods (on splashback of fryer) to allow draining of excess oil.

### B. TS Model

1. Fill fryer as described on page 4 - Filling.
2. Set thermostat to the desired frying temperature (between 325°F - 335°F).
3. When oil reaches the desired frying temperature, the “HEAT” light will go off and the ”COOK” light will illuminate.
4. Lower filled basket(s) slowly into the hot oil.
5. Set timer for left or right side basket, whichever is being lowered into oil.
6. When timer sounds, carefully lift basket(s) out of oil and place them on basket hanger rods (on splashback of fryer) to allow draining of excess oil.

### C. Basket-Lift Model

1. Fill fryer as described on page 4 – Filling.
2. Set thermostat to the desired frying temperature (between 325°F - 335°F).
3. When oil reaches the desired frying temperature, the “HEAT” light will go off and the “COOK” light will illuminate.
4. Fill basket(s) to proper level and place on upper bar of lift rod(s).
5. Set timer(s) to desired cooking time using up or down arrow buttons. For programming timers, see page 9.

6. Push “START/STOP” button on timers(s). Basket(s) will automatically lower into fryer vessel.

7. When cooking cycle is complete, an audible alarm will sound and the basket(s) will raise automatically. Allow oil to drain before removing baskets.

### D. CPU Model

See separate fryer instructions or call 1-800-KEATING.

## SHUTDOWN

### A. AA and CMG Models

1. Turn fryer On/Off switch to “OFF” position.

2. Rotate tan gas valve knob to “PILOT” position, push it in slightly, and rotate it to “OFF” position.

### B. BB, TS, CPU and Basket-Lift Models

1. Set Fry/Off/Melt switch (BB Model), Cook/Idle/Melt switch (TS and Basket-Lift Models) or Fry/On/Off switch (CPU Model) to the “OFF” (BB and CPU Models) or “IDLE” (TS and Basket-Lift Models) position.

2. Turn main power On/Off switch to the “OFF” position.

## DRAINING

**WARNING**

**ALWAYS SHUT THE FRYER OFF COMPLETELY BEFORE DRAINING. THE FRYER SHOULD BE DRAINED ONLY UNDER THE SUPERVISION OF PROPERLY TRAINED PERSONNEL. A DRAIN PIPE AND COVERED CONTAINER SUITABLE FOR USE WITH HOT OIL SHOULD BE USED TO ENSURE THE SAFETY OF THE OPERATOR.**

1. Operator should be outfitted with proper attire including:

   –Oil and heat resistant gloves
   –Oil and heat resistant apron
   –Safety goggles
   –Oil and heat resistant footwear

**Figure 3-3**

**Operator in safety gear**

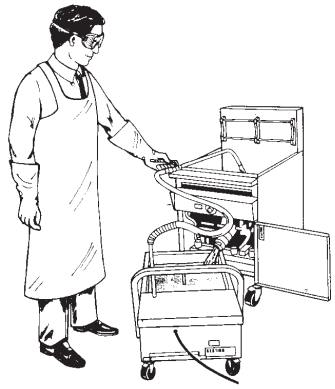
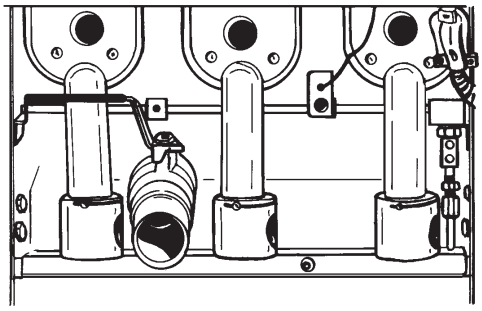
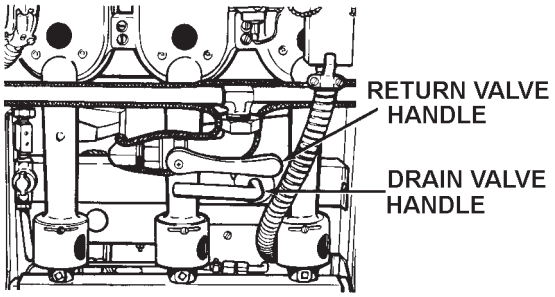


**Figure 3-4**

**Drain and drain valve**



**Front Drain**




**Rear Drain**

2. Turn off the fryer and open the door.

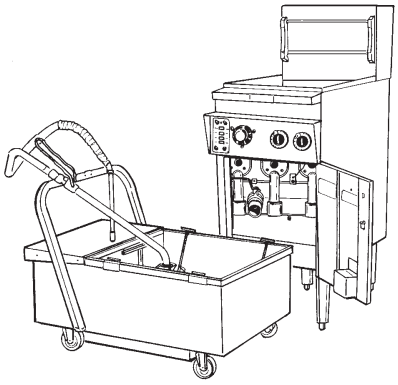
3. For front drain fryers, put approved container under drain valve. For fryers with a central filter, slide filter drawer in completely.

4. For front drains slowly turn handle forward to avoid splashing. The drain valve will be completely open after 1/4 turn.

5. For units with rear drain valves, slowly pull drain valve operating handle straight out (unhook from metal latch first).

**Figure 3-5**

**Nutroilator filter and fryer**



**WARNING**

**UNDER NO CIRCUMSTANCES SHOULD YOU PERMIT HOT OIL TO COME IN CONTACT WITH WATER OR ICE. ALL DRAINING SHOULD BE DONE UNDER THE SUPERVISION OF PROPERLY TRAINED PERSONNEL. A DRAIN PIPE AND COVERED CONTAINER SUITABLE FOR USE WITH HOT OIL SHOULD BE USED WHENEVER A FRYER IS DRAINED. ALWAYS DRAIN OIL INTO A COVERED RECEPTACLE.**

## CLEANING AND BOIL-OUT

When cleaning and boiling out your fryer use Keating Sea Powder and Keating Klenzer to keep your fryer in top condition. Keating Sea Powder dissolves any grease build up—even carbonized grease in fryer vessels—one of the leading causes of premature oil breakdown. And once your fryer vessel is clean, use Keating Klenzer, the finest dry stainless steel polish available, to restore your Keating Instant Recovery® Gas fryer's exterior to its original luster.

**CAUTION:** Disconnect electric power source before cleaning.

**CAUTION:** To avoid damaging the fryer, do not power wash, spray or hose it down while cleaning it.

**Figure 3-6**

**Keating Klenzer and Sea Powder**

1. Put on safety attire. See page 7 – Draining.
2. Turn the fryer off.
3. Drain oil from fryer. Filtering may be done at this step.
4. Remove oil container to a secure area to prevent accidental spillage.
5. Fill fryer vessel to “Fill Level” line with water.

**WARNING**

**UNDER NO CIRCUMSTANCES SHOULD THE FRYER BE LEFT UNATTENDED DURING BOIL-OUT. TRAINED PERSONNEL MUST BE PRESENT DURING THE PROCEDURE TO PREVENT BOIL OVER OR TO TURN OFF THE POWER IF WATER DROPS BELOW HEAT TRANSFER TUBES.**

6. Set thermostat and turn fryer on to bring water to a gentle boil.
7. Once boil has been reached, turn fryer off.
8. Dissolve 2/3 cup of Keating Sea Powder for every five gallons of water and let soak for 1/2 hour. If there is a large build-up of carbonized grease, allow fryer to soak overnight.

**CAUTION:** Do not damage or reposition thermostat bulb as this may affect the accuracy of the fryer.

9. While soaking, a natural fiber brush may be used to scrub the tubes and inside walls of fryer.
10. Drain the water and Sea Powder into a dry suitable receptacle and remove from cooking area.
11. Spread Keating Klenzer liberally on tubes and sides of fryer vessel.
12. At this point, a non-abrasive scouring pad may be used to remove the now softened carbonized grease.
13. Thoroughly rinse fryer vessel with potable water to remove all Klenzer.
14. Prior to refilling with oil, wipe the inside of the fryer vessel making sure all water and Klenzer has been removed.

**WARNING**

**WATER (IN ANY FORM) AND HOT OIL DON’T MIX!!!**

15. Close drain valve.

**WARNING**

**FAILURE TO CLOSE DRAIN VALVE BEFORE REFILLING THE FRYER MAY RESULT IN SERIOUS INJURY.**

**WARNING**

**WHEN YOUR FRYER IS BEING USED IN CONJUNCTION WITH A CENTRAL FILTER, DISCONNECT POWER SUPPLY BEFORE RESETTING MOTOR TO PREVENT SERIOUS INJURY WHEN RESET SWITCH IS ENGAGED (SEE FILTER MANUAL).**

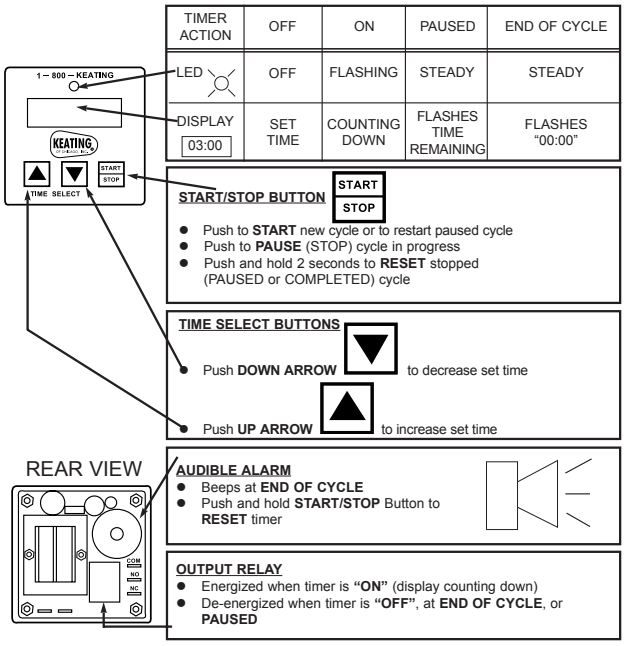
16. Check thermostat bulb positioning – see page 10.

17. Refill the fryer with new or filtered oil.

## ELECTRONIC TIMERS

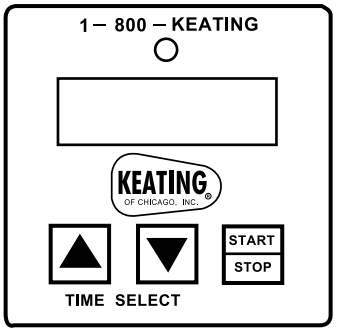
The electronic timers provide a clearly visible and accurate display and are very easy to use. This procedure resets the timer to operate in minutes:seconds.

### A. TIMER OPERATION




### B. How to program the "Keating" Electronic Timer

**STEP 1**




Make certain power to the timer has been OFF for at least 30 seconds. Then PRESS and hold down the UP arrow button while turning the rocker power switch to the ON position.

---

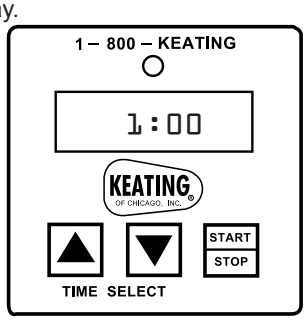
**Note**: If power switch does not turn off timers, the unit must be unplugged (two people may be needed).

The timer will turn ON and the display will now be indicating

The BEEPER will BEEP 4 times.

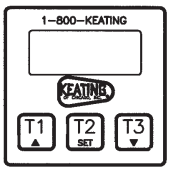
*If STEP 1 was OK, proceed to STEP 2. If not, retry Step 1 making sure the power was OFF for at least 30 seconds or more.*

**STEP 2** PRESS all 3 buttons in sequence: left-center-right. The BEEPER will BEEP when each button is pressed. If BEEPER does not BEEP, the timer is defective. STOP TESTING. Reset procedure is completed when 1:00 appears on the digital display.




## OPTIONAL TIMER OPERATING INSTRUCTIONS PART # 056921

### DIGITAL TIMERS




The electronic timers, standard on TS & IFM models, provide a clearly visible and accurate display and are very easy to use.

### PROGRAMMING

To program the timers, the unit must be in the idle mode. Press and hold the set button for approximately two seconds. The display will show "SEt". Press the button for the channel to be programmed. The display will show the current setting for that channel. Use the up or down button to increment or decrement the setting. When the setting is correct, press and hold the set button again for approximately two seconds. The display will show "StO" for approximately two seconds and the timer will return to normal operation. Repeat the process as necessary for the other timers.

### OPERATING LOGIC

When the timer is powered up, the display will show the time setting for the channel that was operated last and the relay output contacts will be open. To start a cycle, press the desired channel button (1-3). The display will begin to countdown from the preset time setting and the relay

output contacts will close. During the countdown the colon will flash at a one-second rate. When the countdown has reached "00:00" the relay output contacts will open, the display will flash, and the audible alarm will sound. To cancel the audible alarm, press any button.

### PAUSE FEATURE

To pause a cycle in progress, press any button. The relay output contacts will open, the display will flash, and the countdown will pause. To resume the countdown, press any button. The display will resume the normal countdown and the relay output contacts will close.

### CANCELING A CYCLE

To cancel a cycle in progress press and hold any button for approximately two seconds. The relay output contacts will open and the display will show the time setting for the channel last used.

# IV MAINTENANCE

## WARRANTY REPAIRS

Keating's warranty begins with the date of installation (or ship date if we are not notified of an installation date). In the event that your fryer, under warranty, needs repairs other than routine maintenance or cleaning, you are requested to contact Keating of Chicago (at 1-800-KEATING) before calling a local service company. (Failure to do so may void your warranty).

## PREVENTIVE MAINTENANCE

Preventive maintenance should be done in daily, weekly, monthly and yearly intervals as necessary. Following preventive maintenance procedures will help keep your fryer working efficiently. Proper care and servicing will lead to years of quality performance.

### A. Oil Breakdown

As part of a "Preventive Maintenance Program", the oil in your fryer needs to be filtered regularly to avoid breakdown. The initial investment in the frying system is less than the total overall costs of oil during the life of the fryer, and with regular filtering, you can realize substantial savings in oil costs, as well as, maintenance charges.

### B. Limited Calibration (less than 25°F off)

You will need:
One standard flat blade screwdriver
One accurate fryer thermometer

1. Set thermostat to desired frying temperature.
2. Allow fryer to cycle three times.
3. Place an accurate thermometer in the oil at the thermostat bulb.

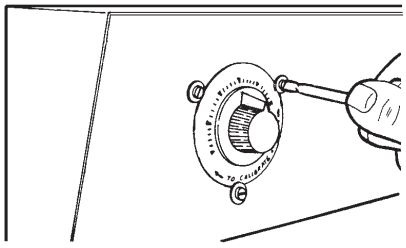
**PREVENTIVE MAINTENANCE CHART**

| TIME FRAME | OPERATOR/OWNER | SECTION |
|---|---|---|
| **Daily** | ● Check lights and controls.<br>● Check that the oil is up to "Fill Level" Line.<br>● Clean all baskets.<br>● Drain, strain or filter oil.* | III |
| **Weekly** | ● Drain and clean fryer.*<br>● Boil-out fryer. | III |
| **Monthly** | ● Verify thermostat settings.<br>● Test Hi-Limit control.<br>● Verify all thermostat settings. | IV |
| **Yearly** | **QUALIFIED SERVICE PERSONNEL ONLY**<br>● Disassemble fryer to clean pilot and burners orifices and runner pilot tube.<br>● Check and replace radiants.<br>● Calibrate thermostat. | IV & V |

*High production facilities should be checked more often.

**Figure 4-1**

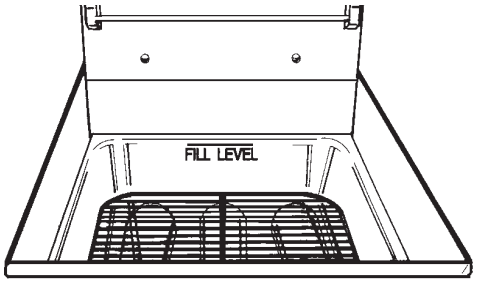
**Thermostat calibration with knob on**



**NOTE:** Locate thermometer in same position for every calibration. Position at thermostat bulb is recommended.

**Figure 4-2**

**Place thermometer in oil**




4. If calibration of fryer is found to be less than 25°F off, simply loosen three dial plate retaining screws, rotate dial plate to match thermometer reading and tighten screws. If it is more than 25°F off contact a qualified service company.

### C. Thermostat Bulb Positioning

*BEFORE REPLACING, TEST THERMOSTATS:*

**These operational problems can easily be corrected by thermostat bulb positioning.**

Keating's patented thermostat application is accurate within 2°F of the dial setting between 250°F – 350°F. This accuracy is attained only if the thermostat bulb is placed properly against the heat transfer tube. To quickly and accurately test for proper bulb placement, a single thickness of writing paper should be pulled through between the tube and the bulb with medium resistance.*

**1. *For gas fryers 14":**

- The end of thermostat bulb should touch the burner tube.

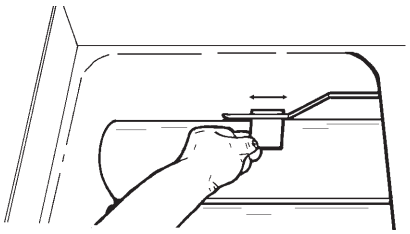
**2. For gas fryers 10x11, 18 & up:**

- If the bulb is too loose, the paper will slip through with little or no resistance. A fryer with a thermostat bulb that is too loose will overshoot.

  *Overshoot*: The thermostat takes a long time to cycle and then misses its preset temperature by 20°F - 40°F yielding a poor quality product.

- If the bulb is too tight, the paper will either not pull through or it will tear. A fryer with a thermostat bulb that is too tight will short cycle.

  *Short Cycle*: The thermostat will cycle rapidly while the fryer is in the idle mode; the temperature will be erratic.



**Thermostat Bulb Positioning 10x11, 18 & up Fryer Gas**

REQUIRED TEST EQUIPMENT:
Multimeter (for testing continuity)

CHECKING CONTINUITY WITH THE MULTIMETER

1. Rotate the thermostat shaft until an audible click is heard.
2. Rotate the thermostat shaft left and right ten times causing the switch to click on and off ten times, while using the Multimeter to verify continuity.
3. If the switch does not show continuity during all ten trials, replace the thermostat.

**WARNING:** Disassembling the thermostat will void the thermostat warranty.

1. Set compression ring onto capillary end of bulb finger tight, 1/2" from end of capillary.
2. Insert new thermostat bulb through control panel back.
3. Apply oil resistant flexible sealant onto compression fitting thread before installing fitting into fryer vessel.
4. Position bent portion of bulb against far right heat transfer tube and install compression fitting snugly into fryer vessel.
5. Adjust bulb so at least 2" of bent portion of it is next to heat transfer tube and tighten compression nut onto compression fitting for fryer 10x11, 18 & up. The end of thermostat bulb should touch the burner tube for 14" fryers.
6. Refill fryer with oil to "fill level line".
7. Start fryer, preheat and calibrate with thermometer.

### D. Hi-Limit Check

The manual Hi-Limit test button can be used to test the Hi-Limit Control by pushing and holding the button in until the fryer reaches the Hi-Limit temperature (425°F). Place an accurate thermometer in the oil. If the Hi-Limit Control doesn't shut off the fryer between 425°F and 450°F, have it replaced.

# V SERVICE DIAGNOSIS

A properly adjusted Keating Instant Recovery® Fryer, with no load, will cycle "On" approximately every 2-1/2 to 3 minutes. Each cycle will last 15 to 25 seconds, ensuring that the temperature setting is held within a narrow band.

- The burners when on will produce clear blue flames directed at the inside walls of the heat transfer tubes. The radiant's fins, located towards the rear of each transfer tube, will glow bright red, helping to ensure optimum heat distribution into the fryer vessel. All radiants should be pulled gently forward until their retaining clips engage the rear of the tubes.
- On constant pilot models, the pilot light will be between 3/8" to 1/2" high and will use about 180 BTU's of gas per hour.
- The runner pilot tube is used to ignite the burners. Flames from the tube should be clear blue and between 3/8" to 1/2" high spread across the entire tube. The burners will ignite almost instantly after the thermostat calls for heat.
- Every Keating Instant Recovery® Gas Fryer has a number of safety controls to ensure safe operation and guard against component failure. Operation of each control is explained in Section VI – Service.

### A. Trouble shooting

The following diagnosis is only to be used as a guide to qualified service personnel. Keating recommends that you use a qualified service company. Call 1-800-KEATING if you need assistance in locating a qualified service company.

| PROBLEM | PROBABLE CAUSE | SOLUTION |
|---|---|---|
| Constant pilot won't light. | a. Gas isn't turned on. | a. Turn manual gas valve on. If using flexible connector with quick disconnect, make sure quick disconnect is completely engaged. |
| | b. Clogged constant pilot tubing. | b. Turn fryer and manual gas valve off. Clean tubing. |
| | c. Constant pilot valve isn't turned on. | c. Turn constant pilot valve on and adjust pilot flame height. |
| Runner pilot tube won't light. | a. Gas isn't turned on. | a. Turn manual gas valve on. If using flexible connector with quick disconnect, make sure quick disconnect is completely engaged. |
| | b. No electricity to fryer (BB & TS models). | b. Plug fryer into approved outlet. |
| | c. Hi-Limit has been activated | c. Push Hi-Limit reset button located under control panel. See figure 2-4. |
| | d. Clogged runner pilot orifice(s). | d. Turn fryer and manual gas valve off. Clean orifice(s) and other parts as necessary. |
| | e. Drain valve handle isn't pushed in completely (Central filter only). | e. Push in and latch drain valve handle to activate rear drain safety switch. |
| Runner pilot won't stay lit. | a. Low gas supply or pressure. | a. Verify if size of incoming gas line to fryer and manifold gas pressure are adequate. |
| | b. Dirty runner pilot tube or pilot orifice(s). | b. Turn fryer and manual gas valve off. Clean orifice(s) and pilot tube. |
| | c. Low pilot flame height. | c. Adjust pilot flame height. |
| | d. Flame switch control is faulty (BB & TS models). | d. If it takes more than 60 seconds for pilot to stay lit, replace flame switch control. |
| | e. Hi-Limit has been activated | e. Push Hi-Limit reset button located under control panel. See figure 2-4. |
| | f. Exhaust problems or drafts in kitchen. | f. Install or adjust flue restrictors. If problem persists, contact your HVAC representative. |
| | g. Thermopile or gas valve is faulty (AA & CMG models). | g. Perform millivolt tests. Replace faulty thermopile or gas valve. |
| | h. Delayed ignition. | h. See diagnosis below. |
| Delayed ignition. | a. Dirty runner pilot tube or pilot orifice(s). | a. Turn fryer and manual gas valve off. Clean orifice(s) and pilot tube. |
| | b. Low pilot flame height. | b. Adjust pilot flame height. |
| | c. Exhaust problems or drafts in kitchen. | c. Install or adjust flue restrictors. If problem persists, contact your HVAC representative. |
| | d. Low gas supply or pressure. | d. Verify if size of incoming gas line to fryer and manifold gas pressure are adequate. |
| Burners won't come on. | a. Thermostat is faulty. | a. Push and hold in Hi-Limit test button. If burners come on, replace thermostat. |
| | b. Fry/Off/Melt switch (BB & TS models) or On/Off switch (AA & CMG models) is faulty. | b. Replace switch. |
| | c. Faulty gas valve. | c. Replace gas valve. |
| Flames come out top of flue | a. Excessive gas supply or pressure. | a. Adjust pressure, change burner orifices or install in-line regulator. |
| | b. Collapsed burner radiants. | b. Replace radiants. |
| | c. Exhaust problems. | c. Install or adjust flue restrictors. If problem persists, contact your HVAC representative. |

| PROBLEM | PROBABLE CAUSE | SOLUTION |
|---|---|---|
| Flames come out front of fryer. | a. Exhaust problems. | a. Install deflector to block down draft. Install or adjust flue restrictors. If problem persists, contact your HVAC representative. |
| | b. Radiants have slipped forward. | b. Reposition radiants. |
| | c. Flue blockage. | c. Turn fryer and manual gas valve off. Let flue cool and remove foreign objects. |
| Fryer has poor recovery or runs cold. | a. Baskets overfilled. | a. Don't over fill baskets. |
| | b. Fryer vessel overfilled with oil. | b. Fill fryer up to "Fill Level" line as oil expands when heated. |
| | c. Carbon coating on heat transfer tubes. | c. Boil-out fryer. See pages 8 & 9 – Cleaning and Boil-out. |
| | d. Radiant collapsed or out of position. | d. Reposition or replace radiants. |
| | e. Faulty or erratic thermostat. | e. Replace thermostat. |
| | f. Low gas supply or pressure | f. Verify if size of incoming gas line to fryer and manifold gas pressure are adequate. |
| Fryer is overheating. | a. Thermostat bulb improperly placed. | a. Adjust bulb position. See pages 10 & 11 – Thermostat Bulb Positioning. |
| | b. Thermostat out of calibration or is faulty. | b. Check calibration of thermostat and replace if necessary. |
| Oil in fryer vessel smokes. | a. Oil is breaking down. | a. Replace oil. |
| | b. High carbon content in oil. | b. Filter or replace oil. |
| | c. Dirty fryer vessel. | c. Boil-out fryer. See pages 8 & 9 – Cleaning and Boil-out. |
| | d. Inferior grade of oil. | d. Check with oil supplier for higher grade oil. |
| | e. Fryer is overheating and Hi-Limit control has failed. | e. Check thermostat calibration and bulb position (See pages 10 & 11) and replace thermostat if necessary. Check if Hi-Limit trips at 425°F. If not, replace Hi-Limit. |
| Oil in fryer vessel boils over. | a. Baskets overfilled. | a. Don't over fill baskets. |
| | b. Fryer vessel overfilled with oil. | b. Fill fryer up to "Fill Level" line as oil expands when heated. |
| | c. Oil is breaking down and foaming. | c. Replace oil. |
| | d. Water in cold zone. | d. Stir oil with a paddle until water boils off. Filter oil. If water remains, let oil cool and drain a quart of it. |
| Basket-Lift mechanism won't operate. | a. Connections are loose or timer faulty. | a. Tighten connections. Replace timer if faulty. |
| | b. Motor limit switch is faulty. | b. Replace limit switch (14" model). Replace actuator (18" and above models). |
| | c. Lift motor is faulty (14" model). | c. Replace motor. Specify left or right side motor when ordering. |
| | d. Actuator is faulty (18" and above models). | d. Replace actuator. |
| | e. Control circuit fuse has blown. | e. Replace fuse (use type SC-5 in 14" model and type SC-3 in 18" and above models). |
| | f. Relay is faulty (18" and above models). | f. Replace relay. |
| Basket-Lift motor runs, but basket doesn't move. | a. Cam is slipping on motor shaft (14" model). | a. Tighten cam onto flat on motor shaft. |
| Basket-Lift basket goes down, but won't go up. | a. Basket-Lift motor limit switch is misaligned (14" model). | a. Align limit switch. |
| Basket-Lift buzzer won't shut off. | a. Buzzer limit switch is misaligned (14" model). | a. Align limit switch. |

# VI PARTS LISTS

## ORDERING PARTS

Parts may be ordered by part number by calling Keating at 1-800-KEATING or your local service company. You may also order on-line at Keating's part store, www.keatingofchicago.com

Refer to the Keating Instant Recovery® Gas fryer Limited Warranty for complete service and ordering information.

The model/serial plate is located on the inside of the front door. The serial and model numbers are necessary when ordering.

**NOTE:** On Drop-In fryers, the model/serial plate is attached to the top of the control panel.

## WARNING AND OPERATING PLATES

All warning and operating plates on the Keating Instant Recovery® Gas fryer should be in place at all times. If plates are damaged or lost, replace them immediately.

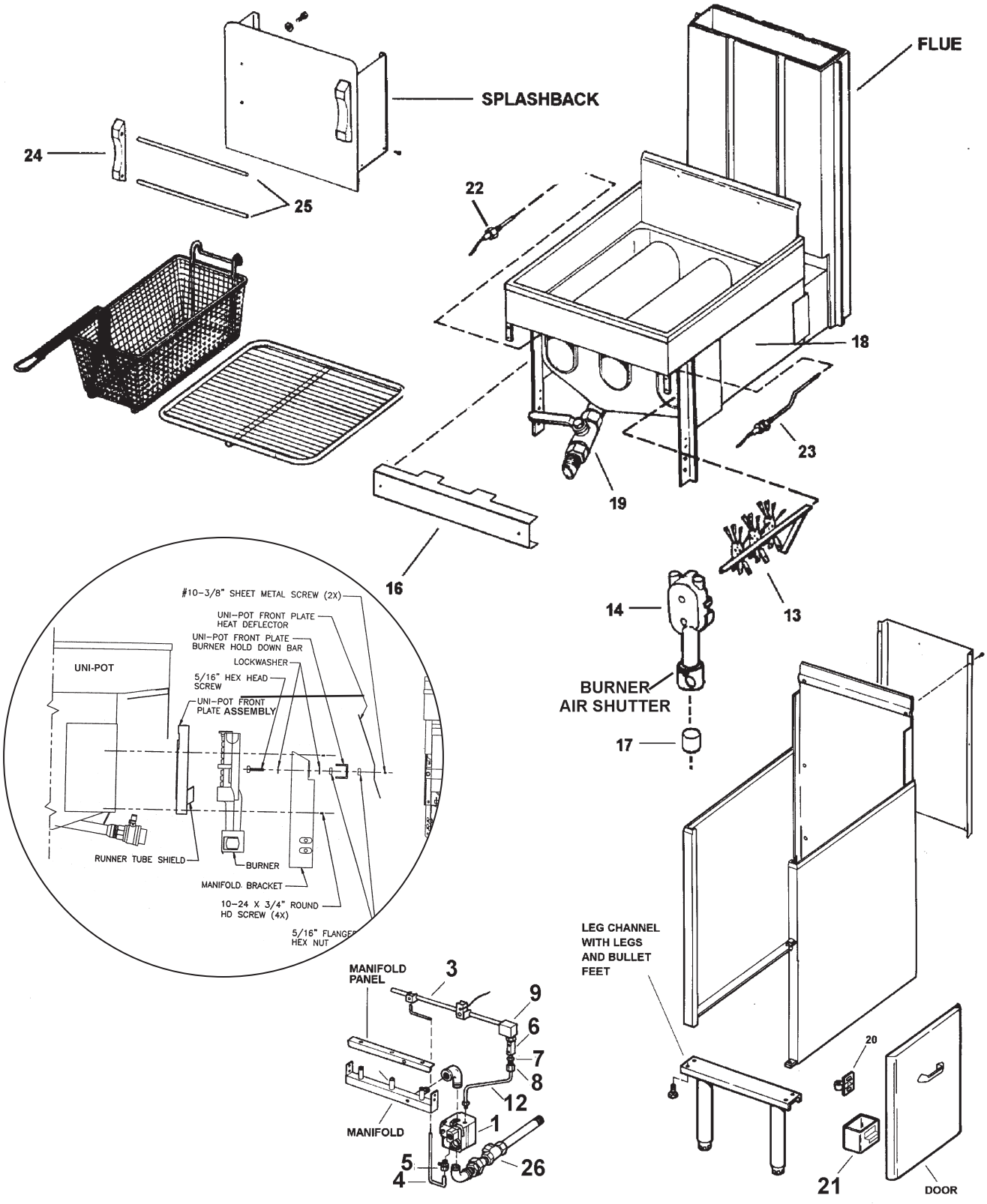
## GAS FRYER PARTS LIST (MODELS WITH UNI-POT) PAGES 15 – 16

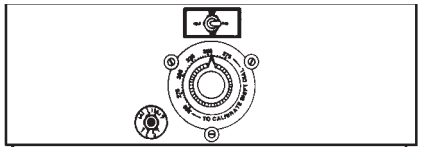
| ITEM | DESCRIPTION | MODELS | PART # | 10x11 | 14 | 18 | 20 | 24 | 34x24 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | GAS VALVE, MILIVOLT | AA, CMG | | | | | | | |
| | | NATURAL GAS | 023625 | 1 | 1 | 1 | 1 | | |
| | | PROPANE | 023624 | 1 | 1 | 1 | 1 | | |
| | GAS VALVE, 120V | BB, TS | | | | | | | |
| | | NATURAL GAS | 004269 | 1 | 1 | 1 | 1 | 1 | |
| | | PROPANE | 008123 | 1 | 1 | 1 | 1 | 1 | |
| | TAN KNOB | AA, CMG | 004803 | 1 | 1 | 1 | 1 | | |
| | PILOT OPERATING HANDLE | CMG | 019426 | 1 | 1 | 3 | 3 | | |
| | BRACKET FOR PILOT | CMG | 004804 | 1 | 1 | | | | |
| | OPERATING HANDLE W/SCREW | | | | | | | | 5 |
| | SCREW FOR KNOB | AA | 004805 | 1 | 1 | 1 | 1 | | 6 |
| 2 | THERMOPILE | AA, CMG | 022770 | 1 | 1 | 1 | 1 | | |
| 3 | RUNNER PILOT TUBE ASSEMBLY* | CALL 1 - 800 / KEATING | 1 | 1 | 1 | 1 | 1 | 1 | |
| 4 | CONSTANT PILOT ASSEMBLY | ALL | 004259 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | CONSTANT PILOT VALVE | ALL | 004266 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | RUNNER PILOT AIR SHUTTER | NIPPLE W/NUT | 015747 | 1 | 1 | 2 | 2 | 2 | 3 |
| | | CLIP | 004090 | 1 | 1 | 2 | 2 | 2 | 3 |
| 7 | RUNNER PILOT ORIFICE | CALL 1 - 800 / KEATING | 1 | 1 | 2 | 2 | 2 | 3 | |
| 8 | RUNNER PILOT ORIFICE HOLDER | STRAIGHT | 004142 | 1 | 1 | 2 | 2 | 2 | 3 |
| 9 | RUNNER PILOT 90° ELBOW | (1/4" - 1/8") | 015746 | 1 | 1 | 2 | 2 | 2 | 2 |
| 10 | RUNNER PILOT TEE | IN TUBING | 006474 | | | 1 | 1 | 1 | 2 |
| 11 | RUNNER PILOT SOLENOID ADAPTER | ALL | 005743 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | ALUMINUM 1/4" TUBING *(Specify length)* | CALL 1 - 800 / KEATING | | 1 | 1 | 3 | 3 | 3 | 5 |
| 13 | RADIANT, 3 - FINS | ALL FRYERS | 000041 | 2 | 3 | 4 | 4 | | 6 |
| 14 | BURNER | ALL | CALL 1-800-KEATING | 2 | 3 | 4 | 4 | 5 | 6 |
| 15 | BURNER ORIFICE | CALL 1 - 800 / KEATING | | 2 | 3 | 4 | 4 | 5 | 6 |
| 16 | BURNER HOLD DOWN BAR | CALL 1 - 800 / KEATING | | 1 | 1 | 1 | 1 | 1 | 2 |
| 17 | BURNER SPACER | 18 AND ABOVE | 019683 | | | 4 | 4 | 5 | 6 |
| 18 | FRYER VESSEL | CALL 1 - 800 / KEATING | | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | DRAIN VALVE, FRONT, 1" | AA, BB, TS, CMG | 004553 | 1 | 1 | | | | |
| | DRAIN VALVE, REAR, 1" | AA, BB, TS | 016341 | 1 | 1 | | | | |
| | DRAIN VALVE, FRONT, 1 1/4" | AA, BB, TS | 004554 | | | 1 | 1 | 1 | 2 |
| | DRAIN VALVE, REAR 1/1/4" | AA, BB, TS | 016342 | | | 1 | 1 | 1 | 2 |
| 20 | DOOR CATCH, ROLLER STYLE | AA, BB, TS, CMG | 004540 | 1 | 1 | 1 | 1 | 1 | 2 |
| 21 | DRIP CUP (INSIDE DOOR) | AA, BB, TS, CMG | 004552 | | 1 | 1 | 1 | 1 | 2 |
| 22 | HI-LIMIT CONTROL W/RESET | AA, BB, TS, CMG | SEE PAGES 18-20 | | | | | | |
| 23 | THERMOSTAT | SEE MODEL | SEE PAGES 18-20 | | | | | | |
| 24 | BASKET HANGER MOUNTING BLOCK | AA, BB, TS, CMG | | | | | | | |
| | | LEFT | 004539 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | CENTER | 003813 | | | 1 | 1 | 1 | 2 |
| | | RIGHT | 004538 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | BASKET HANGER ROD | AA, BB, TS, CMG | SEE BELOW | 2 | 2 | 2 | 2 | 2 | 2 |
| 26 | MAIN SUPPLY GAS VALVE | BB, TS, CMG | 019515 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 18-20 AA | | | | | | | |
| | | 10x11, 14 AA | 019514 | 1 | 1 | | | | |

| ITEM | DESCRIPTION | MODELS | 10x11 | 14 | 18 | 20 | 24 | 34x24 |
|---|---|---|---|---|---|---|---|---|
| 25 | BASKET HANGER ROD | 2/FRYER | 003849 | 003895 | 003935 | 003953 | 003954 | 011954 |

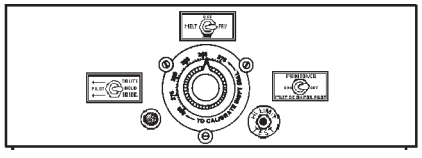
*Includes Items 6-9.

## GAS FRYER ASSEMBLY

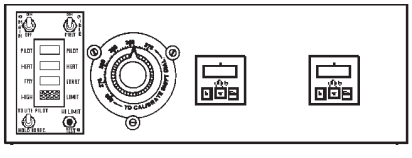


AA/CMG CONTROL PANEL

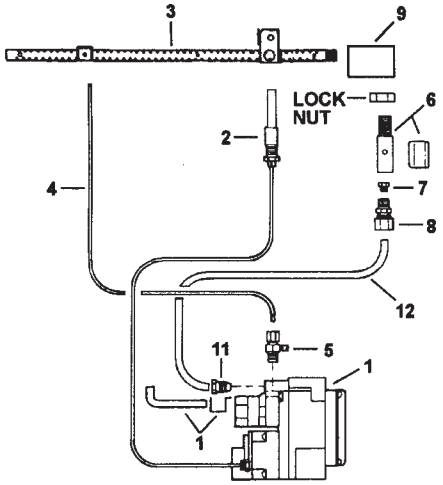


BB CONTROL PANEL

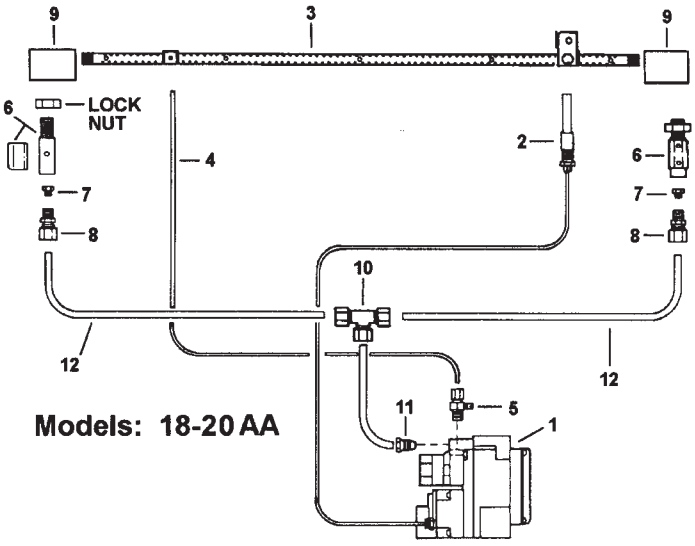


TS CONTROL PANEL

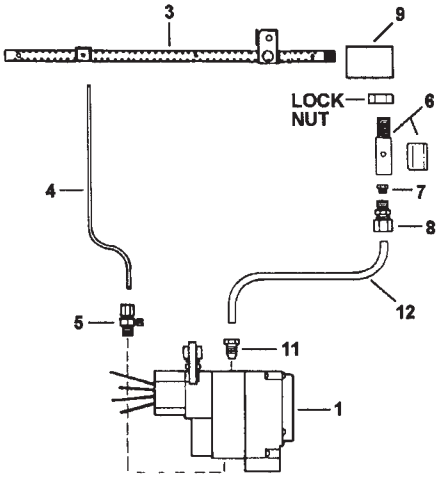
## RUNNER PILOT ASSEMBLY



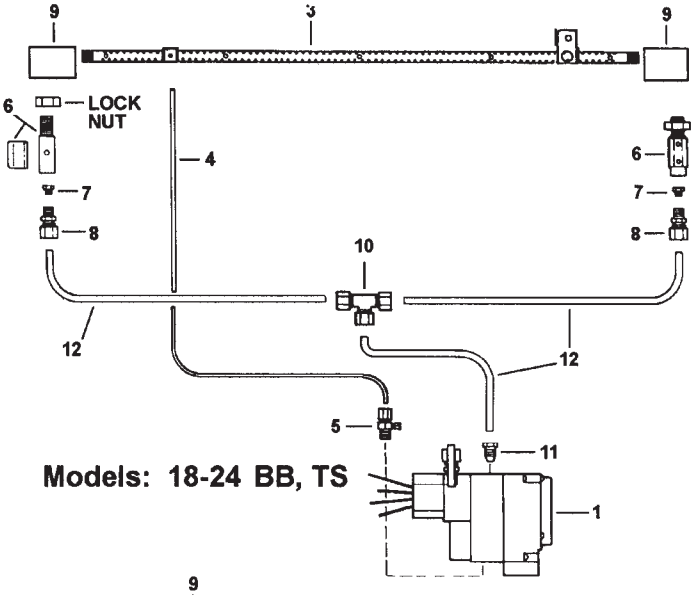

Models: 10x11 14 AA, CMG



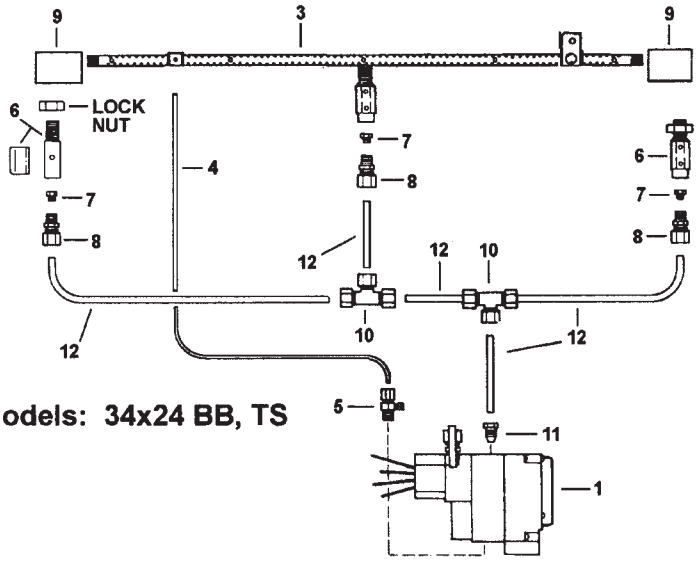

Models: 18-20 AA




Models: 10x11, 14 BB, TS




Models: 18-24 BB, TS




Models: 34x24 BB, TS

See Page 16 for part numbers.

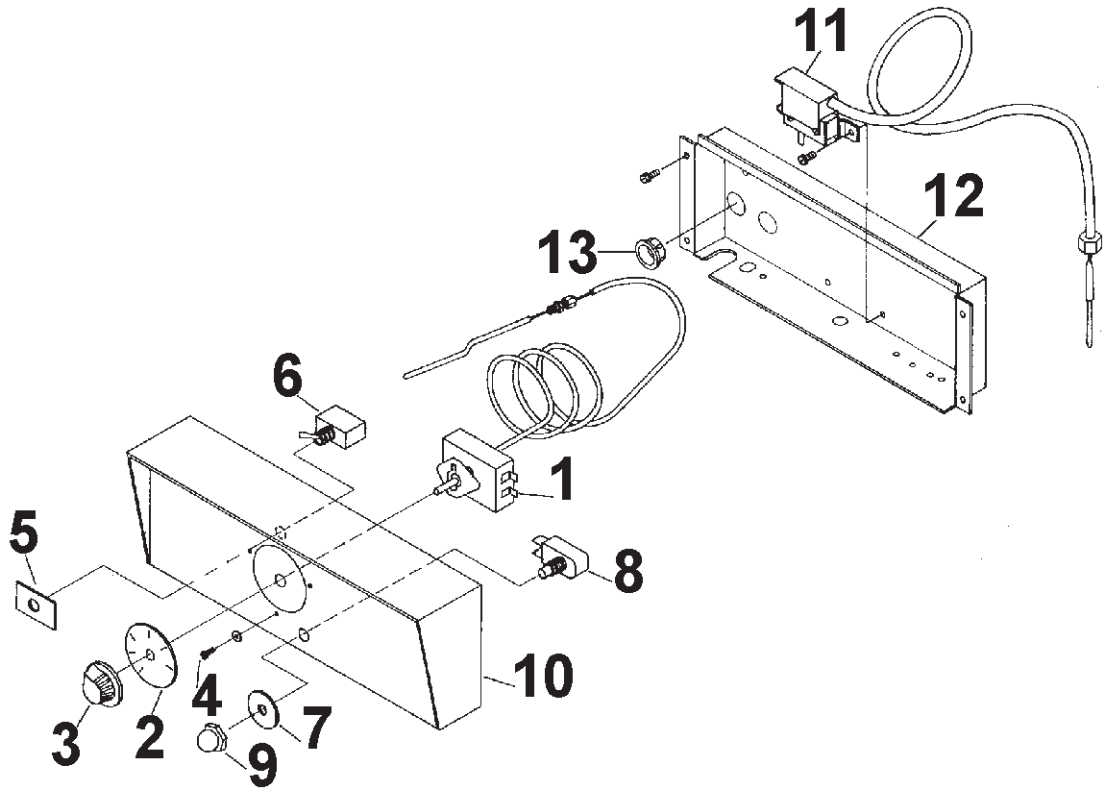



**Figure 6-1 AA and CMG Control Panel**

| ITEM | DESCRIPTION | QTY | PART NUMBER |
|---|---|---|---|
| 1 | THERMOSTAT 14CM & 14AA | 1 | 023145 |
| | THERMOSTAT 10X11 18 & UP | 1 | 035553 |
| 2 | THERMOSTAT DIAL PLATE | 1 | 030833 |
| 3 | THERMOSTAT KNOB | 1 | 004163 |
| 4 | RETAINING SCREWS | 3 | 004610 |
| 5 | FRY/ON/OFF SWITCH PLATE | 1 | 007997 |
| 6 | TOGGLE SWITCH, FRY/ON/OFF | 1 | 004499 |
| 7 | HI-LIMIT TEST PLATE | 1 | 004305 |
| 8 | HI-LIMIT TEST BUTTON | 1 | 004304 |
| 9 | NUT WITH BOOT | 1 | 009389 |
| 10 | CONTROL PANEL, HOODED | 1 | CALL 1-800-KEATING |
| 11 | HI-LIMIT CONTROL | 1 | 004341 |
| 12 | CONTROL PANEL BACK | 1 | --------- |
| 13 | BUSHING, 7/8” | 1 | 000514 |

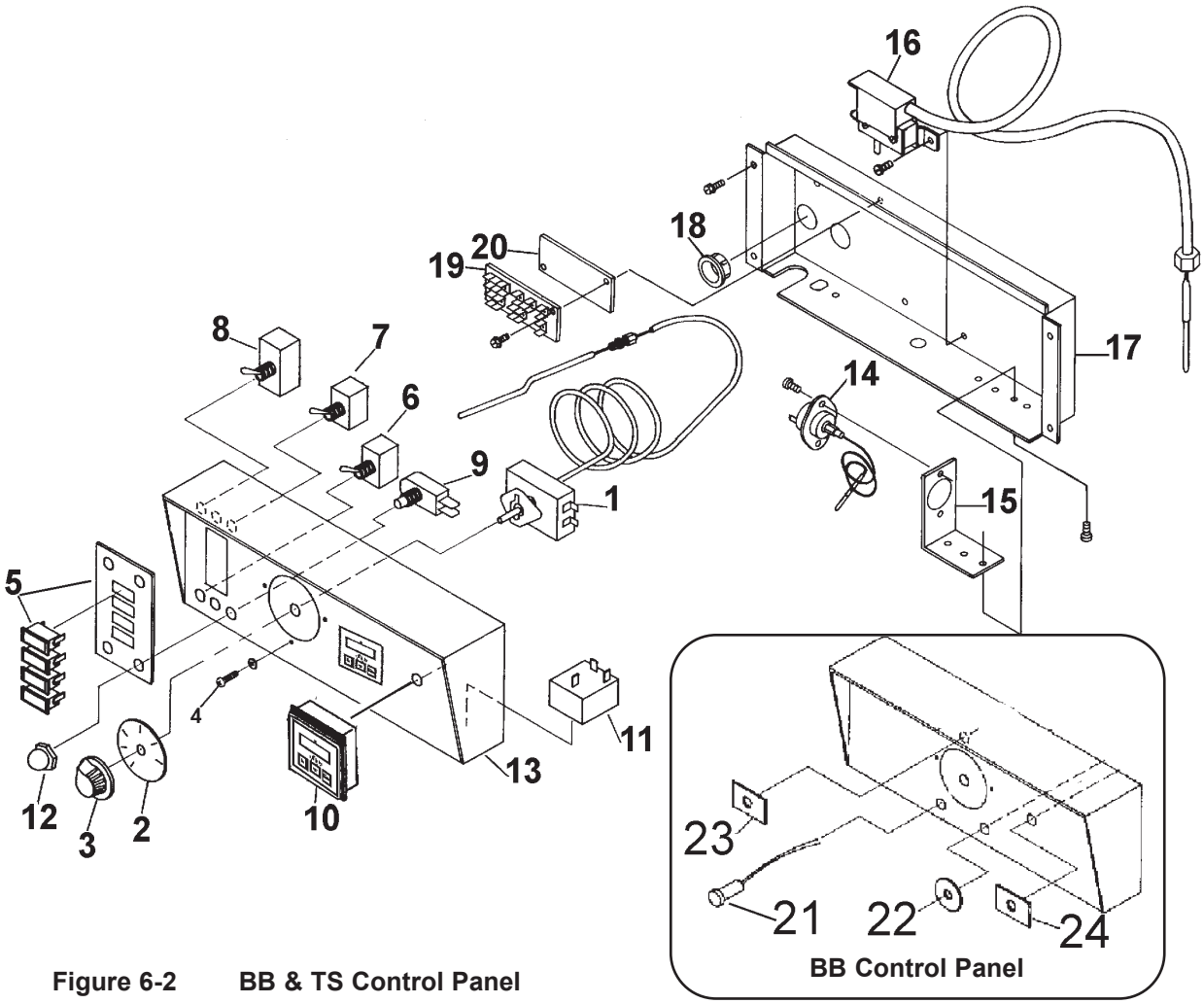



**Figure 6-2 BB & TS Control Panel**

| ITEM | DESCRIPTION | MODEL | QTY | PART NUMBER |
|---|---|---|---|---|
| 1 | THERMOSTAT 14 | BB & TS | 1 | 035574 |
| | THERMOSTAT 10X11, 18 & UP | | 1 | 035575 |
| 2 | THERMOSTAT DIAL PLATE | BB & TS | 1 | 004164 |
| 3 | THERMOSTAT KNOB | BB & TS | 1 | 004163 |
| 4 | RETAINING SCREWS | BB & TS | 3 | 004610 |
| 5 | SET OF (4) LIGHTS 120V, WITH PLATES | TS | 1 | 004156 |
| 6 | PILOT ON MOMENTARY SWITCH | BB & TS | 1 | 004501 |
| 7 | TOGGLE SWITCH, FRY/OFF/MELT | BB & TS | 1 | 000521 |
| 8 | TOGGLE SWITCH, MAIN ON/OFF | BB & TS | 1 | 004499 |
| 9 | HI-LIMIT TEST BUTTON | BB & TS | 1 | 004304 |
| 10 | TIMER, ELECTRONIC | TS | 2 | 023709 |
| 11 | MELT CONTROL | BB & TS | 1 | 004169 |
| 12 | NUT WITH BOOT | BB & TS | 1 | 009389 |
| 13 | CONTROL PANEL, HOODED | BB & TS | 1 | -------- |
| 14 | FLAME SWITCH CONTROL | BB & TS | 1 | 037406 |
| 15 | FLAME SWITCH CONTROL BRACKET | BB & TS | 1 | 012833 |
| 16 | HI-LIMIT CONTROL | BB & TS | 1 | 004341 |
| 17 | CONTROL PANEL BACK | BB & TS | 1 | --------- |
| 18 | BUSHING, 7/8” | BB & TS | 1 | 000514 |
| 19 | TERMINAL BOARD | BB & TS | 1 | 000639 |
| 20 | INSULATION BOARD | BB & TS | 1 | 000263 |
| 21 | INDICATING LIGHT – AMBER 120V | BB | 1 | 004158 |
| 22 | HI-LIMIT TEST PLATE | BB & TS | 1 | 004305 |
| 23 | FRY/OFF/MELT SWITCH PLATE | BB & TS | 1 | 009919 |

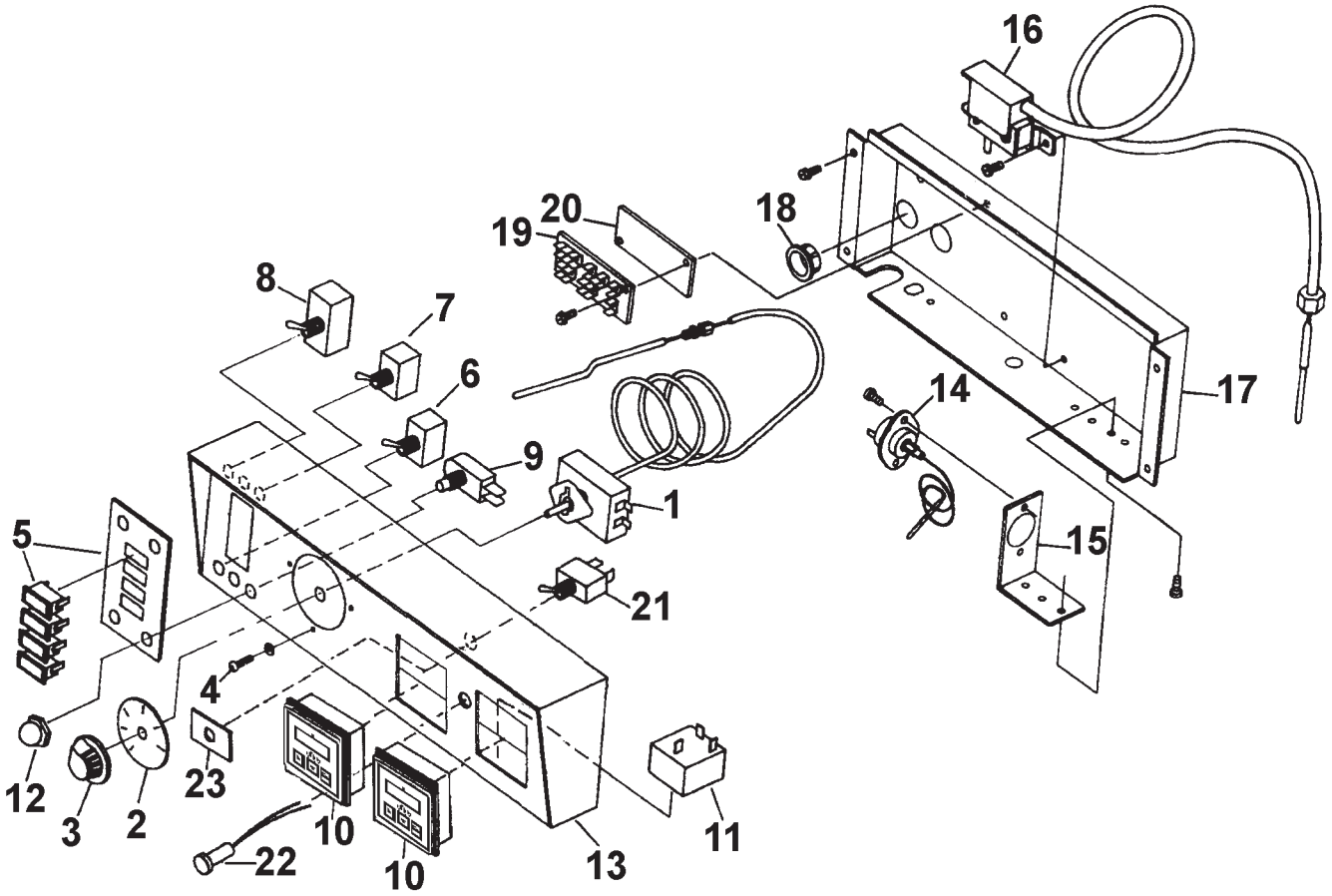



**Figure 6-3 14" – 24"**

**Basket-Lift Control Panel**

| ITEM | DESCRIPTION | QTY | PART NUMBER |
|---|---|---|---|
| 1 | THERMOSTAT 14TS | 1 | 035574 |
| | THERMOSTAT 10X11, 18 & UP | 1 | 035575 |
| 2 | THERMOSTAT DIAL PLATE | 1 | 004164 |
| 3 | THERMOSTAT KNOB | 1 | 004163 |
| 4 | RETAINING SCREWS | 3 | 004610 |
| 5 | SET OF (4) LIGHTS 120V, WITH PLATES | 1 | 004156 |
| 6 | PILOT ON MOMENTARY SWITCH | 1 | 004501 |
| 7 | TOGGLE SWITCH, FRY/OFF/MELT | 1 | 000521 |
| 8 | TOGGLE SWITCH, MAIN ON/OFF | 1 | 004499 |
| 9 | HI-LIMIT TEST BUTTON | 1 | 004304 |
| 10 | TIMER, ELECTRONIC | 2 | 023709 |
| 11 | MELT CONTROL | 1 | 004169 |
| 12 | NUT WITH BOOT | 1 | 009389 |
| 13 | CONTROL PANEL, HOODED | 1 | -------- |
| 14 | FLAME SWITCH CONTROL | 1 | 037406 |
| 15 | FLAME SWITCH CONTROL BRACKET | 1 | 012833 |
| 16 | HI-LIMIT CONTROL | 1 | 004341 |
| 17 | CONTROL PANEL BACK | 1 | --------- |
| 18 | BUSHING, 7/8” | 1 | 000514 |
| 19 | TERMINAL BOARD | 1 | 000639 |
| 20 | INSULATION BOARD | 1 | 000263 |
| 21 | TOGGLE SWITCH, BASKET-LIFT ON/OFF | 1 | 004499 |
| 22 | INDICATING LIGHT – 120V RED, BASKET-LIFT ON/OFF | 1 | 000525 |

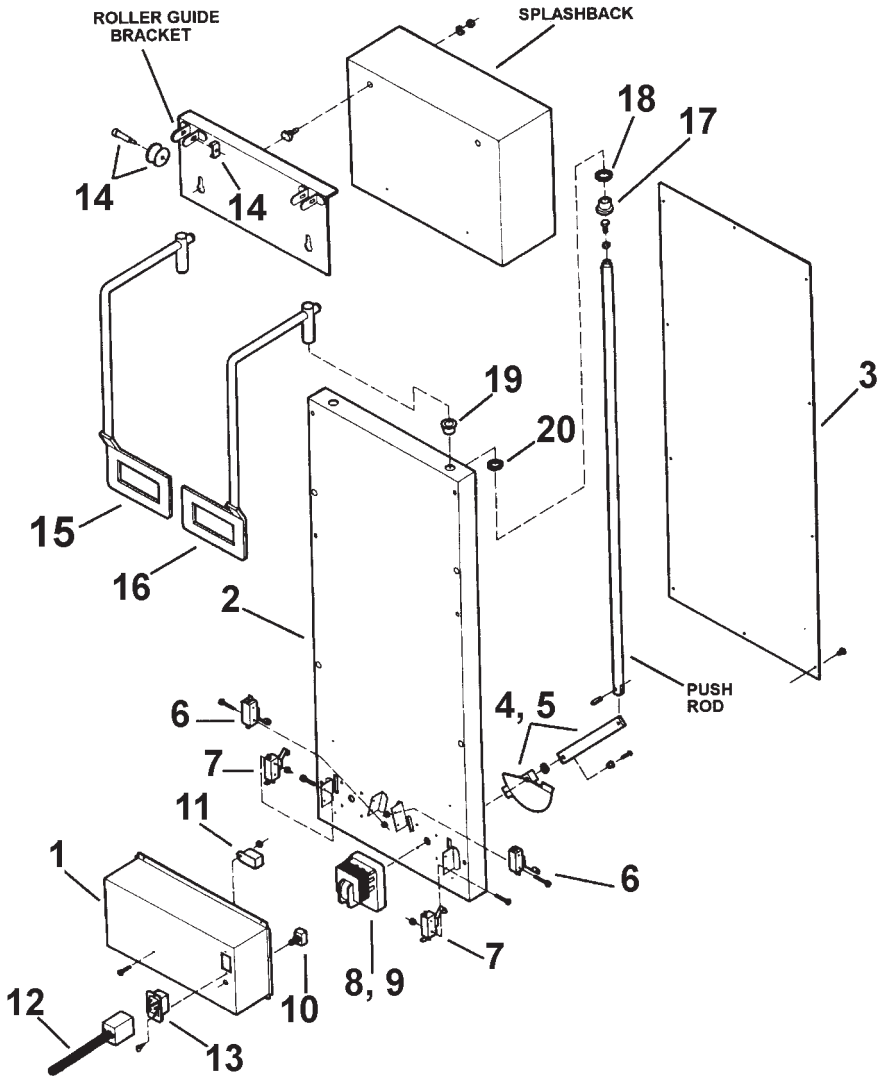



**Figure 6-4 14” Basket-Lift Housing and Roller Guide**

| ITEM | DESCRIPTION | QTY | PART NUMBER |
|---|---|---|---|
| 1 | MOTOR AND WIRE COVER | 1 | ---------- |
| 2 | HOUSING, S/S OR CRS | 1 | ---------- |
| 3 | REAR COVER, S/S OR CRS | 1 | ---------- |
| 4 | LEFT SIDE CRANK BAR AND CAM (Viewing front of fryer) | 1 | 016209 |
| 5 | RIGHT SIDE CRANK BAR AND CAM (Viewing front of fryer) | 1 | 016401 |
| 6 | MIRCROSWITCH, MOTOR LIMIT | 2 | 004592 |
| 7 | MICROSWITCH, BUZZER LIMIT | 2 | 004592 |
| 8 | MOTOR, CCW, LEFT (Viewing front of fryer) | 1 | 000390 |
| 9 | MOTOR, CW, RIGHT (Viewing front of fryer) | 1 | 000391 |
| 10 | BUZZER ON/OFF SWITCH WITH PLATE | 1 | 004499 |
| 11 | BUZZER | 1 | 004223 |
| 12 | WIRE HARNESS ASSEMBLY, W/PLUG, 6-PRONG | 1 | 019600 |
| 13 | RECEPTACLE, 6-PRONG, MALE, WITH WIRE HARNESS | 1 | 018754 |
| 14 | ROLLER FOR LIFT ROD | 2 | 015817 |
| | ROLLER PIN | 2 | 016393 |
| | ROLLER PIN LOCK | 2 | 016392 |
| 15 | LIFT ROD, LEFT (Viewing front of fryer) | 1 | 018990 |
| 16 | LIFT ROD, RIGHT (Viewing front of fryer) | 1 | 018991 |
| 17 | BUSHING, PUSH ROD | 4 | 016405 |
| 18 | BUSHING RETAINING RING | 4 | 015831 |

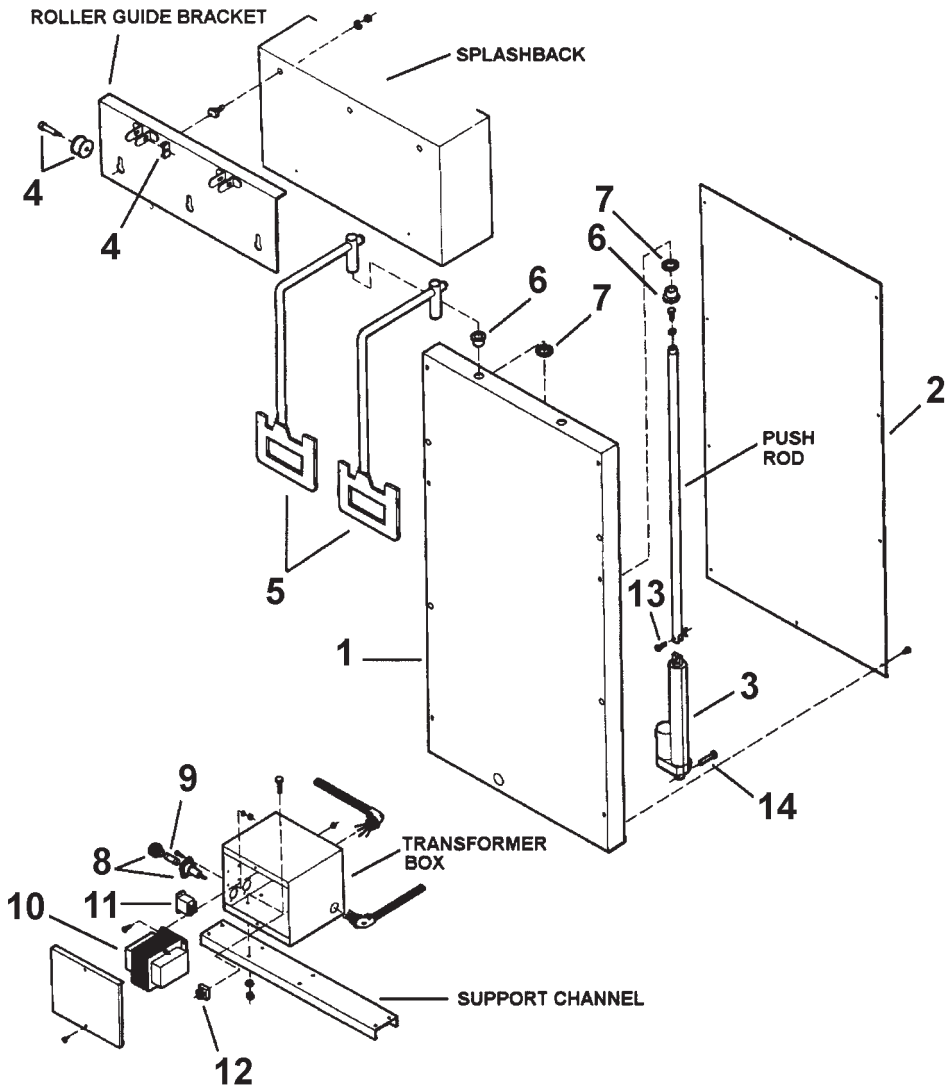


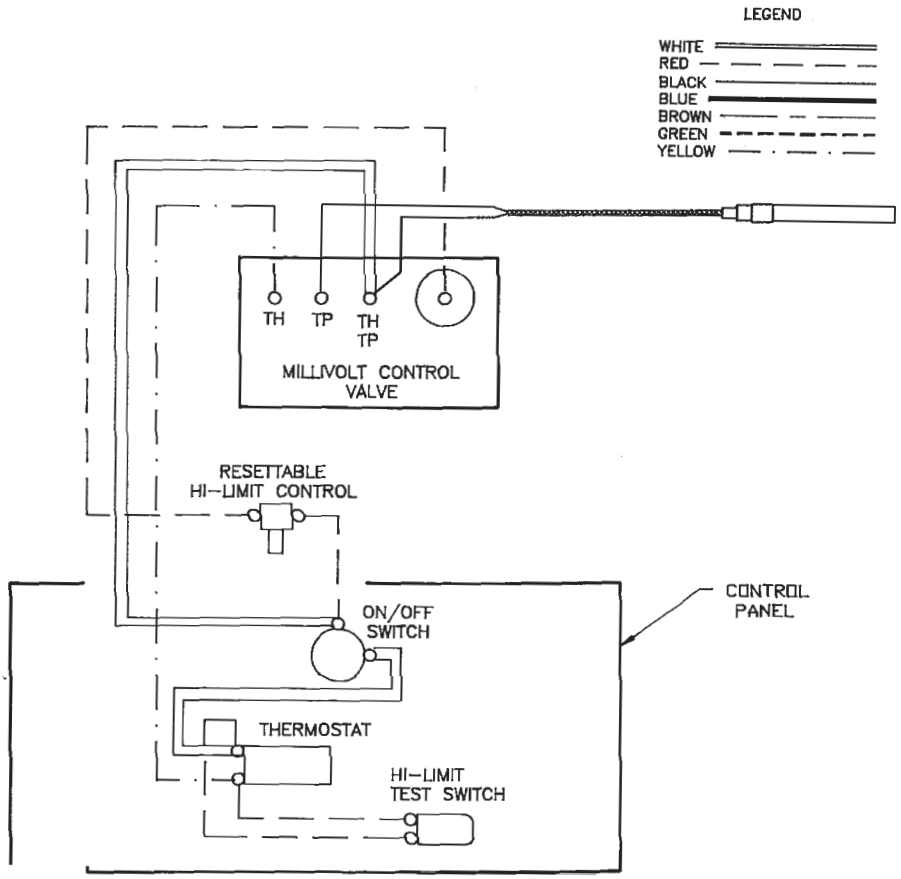

**Figure 6-5 18" - 24" Basket-Lift Housing, Roller Guide and Transformer Box**

| ITEM | DESCRIPTION | QTY | PART NUMBER |
|---|---|---|---|
| 1 | HOUSING, S/S OR CRS | 1 | ---------- |
| 2 | REAR COVER, S/S OR CRS | 1 | ---------- |
| 3 | LINEAR ACTUATOR, 24VDC, WITH LIMIT SWITCHES | 2 | 018471 |
| 4 | ROLLER FOR LIFT ROD | 2 | 015817 |
| | ROLLER PIN | 2 | 016393 |
| | ROLLER PIN LOCK | 2 | 016392 |
| 5 | LIFT ROD, FOR SPLIT BASKETS | 2 | 020086 |
| 6 | BUSHING, PUSH ROD | 4 | 016405 |
| 7 | BUSHING RETAINING RING | 4 | 015831 |
| 8 | FUSE HOLDER | 2 | 004335 |
| 9 | FUSE, ACTUATOR GROUND FAULT, 3A, SC-3 | 2 | 004334 |
| 10 | TRANSFORMER | 1 | CALL 1-800-KEATING |
| 11 | RELAY, BASKET-LIFT | 2 | 008088 |
| 12 | RECTIFIER, 24VD, WITH WIRES | 1 | 019427 |
| 13 | UPPER ACTUATOR CLEVIS PIN, 1/4”x3/4” | 2 | 019218 |
| 14 | LOWER ACTUATOR CLEVIS PIN, 1/4”x1-3/8” | 2 | 019219 |

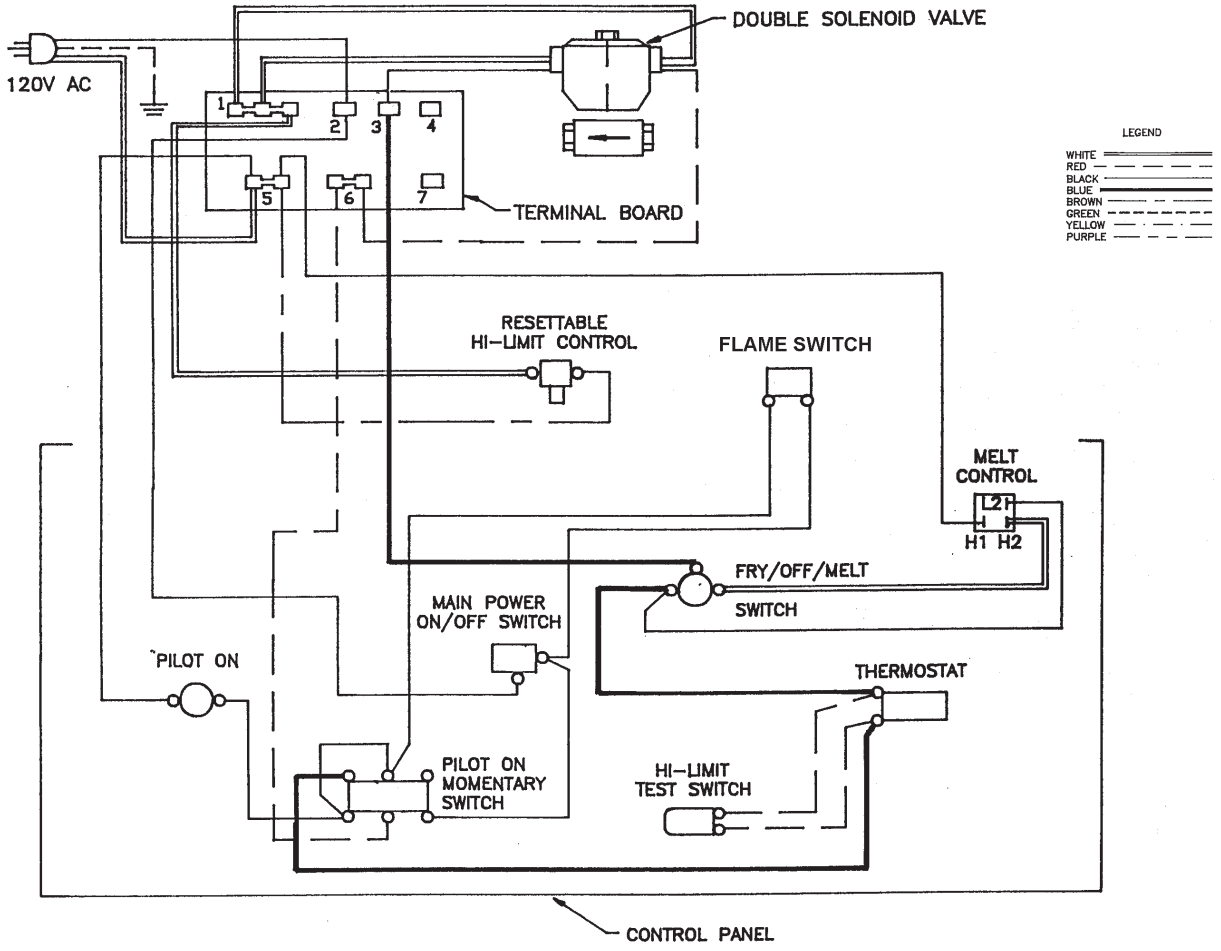
# VIII WIRING DIAGRAMS

**NOTE:** Separate wiring diagrams have been attached to the fryer and on the inside of this manual and should be saved for troubleshooting and maintenance. The wiring diagrams in this section cover standard fryers which may or may not match the diagrams sent with the fryer. Non-standard fryers such as CPU models do not have wiring diagrams printed in this section.

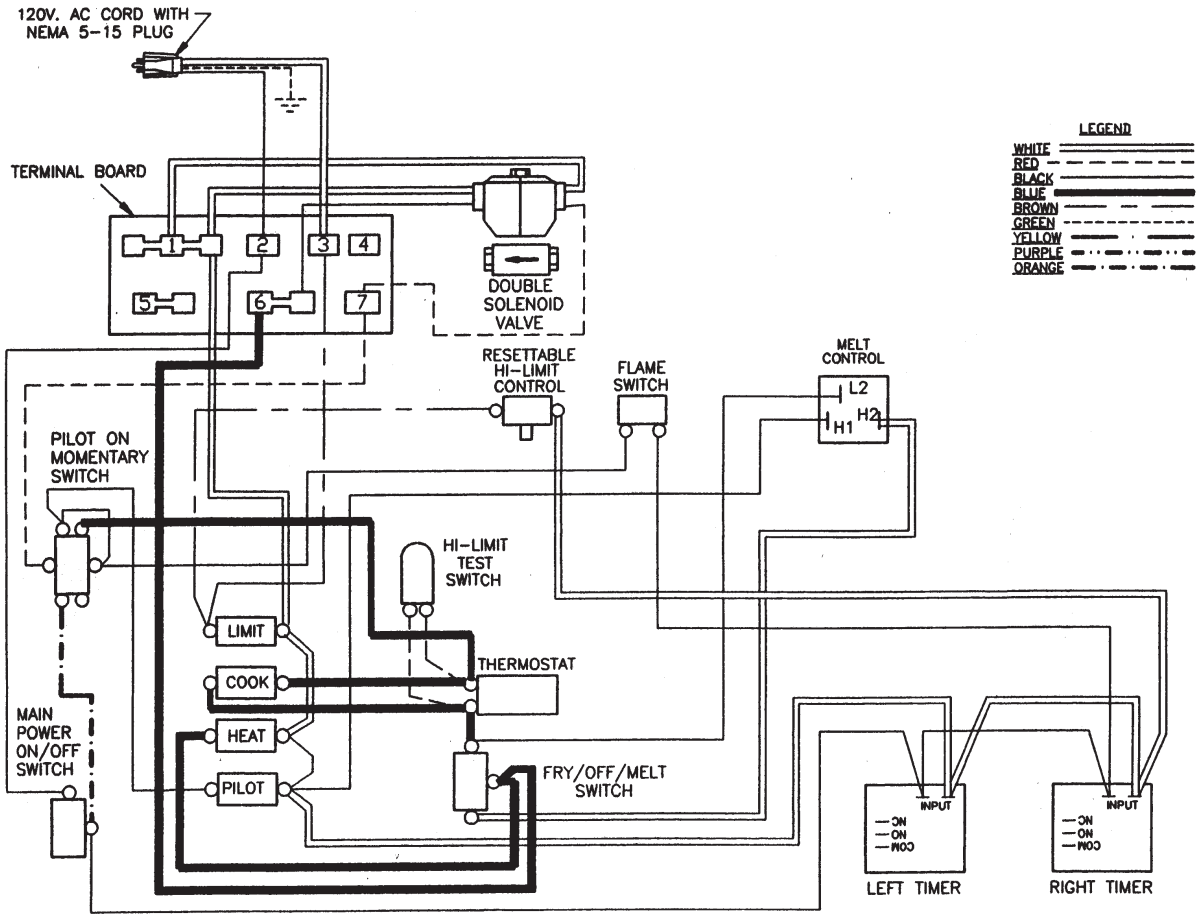
## AA & CMG WIRING DIAGRAM



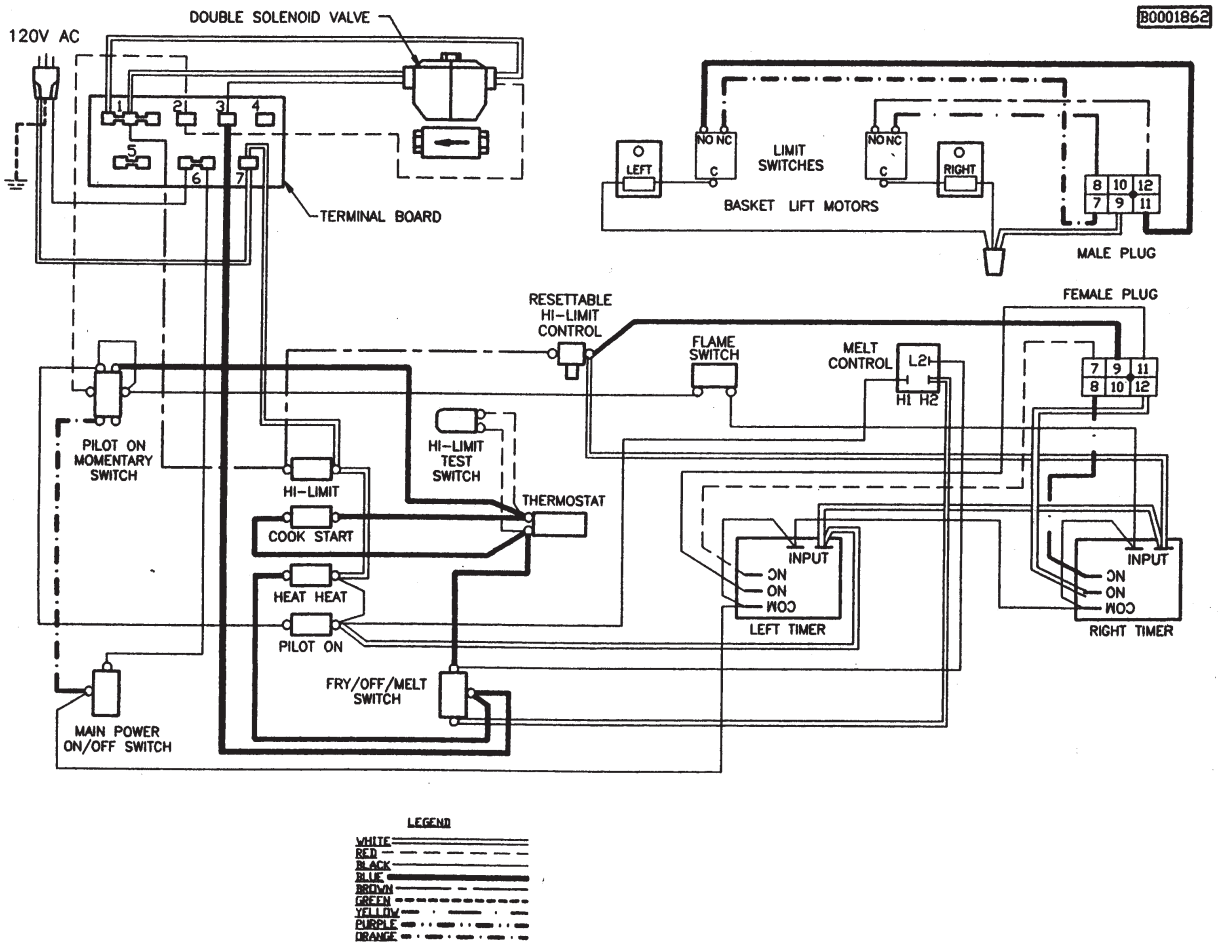
## BB WIRING DIAGRAM



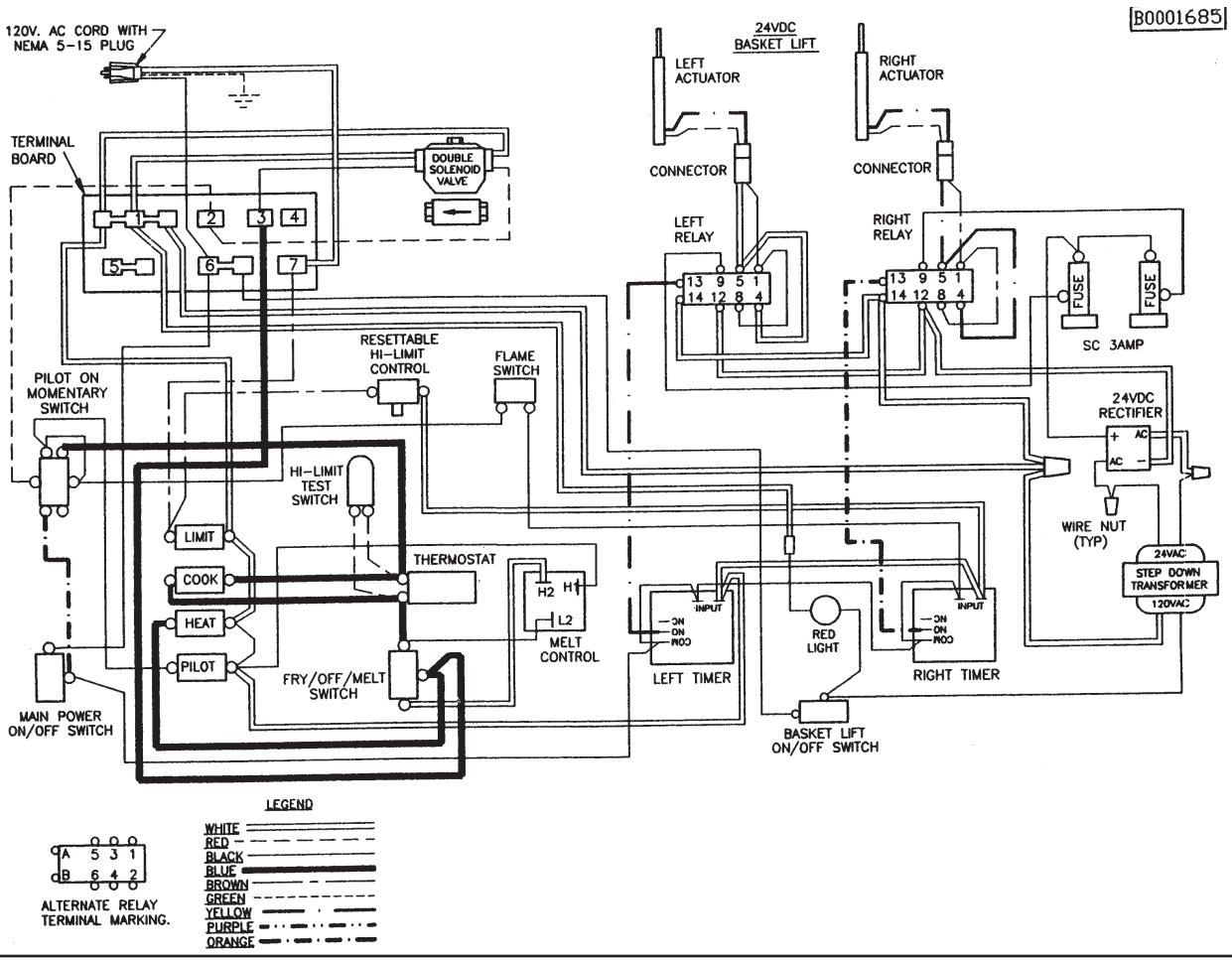

## TS WIRING DIAGRAM



## 14 TS WITH BASKET-LIFT WIRING DIAGRAM




## 18" AND ABOVE TS WITH BASKET-LIFT WIRING DIAGRAM



# WARRANTY

## Limited Warranty

Keating Of Chicago, Inc. ("Keating") warrants to the original purchaser. ("Customer"), all new Keating Fryers, Filter Systems, Griddles, Keep Krisp®, Custom Pasta Systems, Top-Side™ Cookers, Computer Timers, Fryer & Pasta Vessels, and Keating replacement parts ("products") installed after June 1, 1994 to be free to defects in material or workmanship, subject to the following terms and conditions.

## Length Of Warranty

All products other than Fryer & Pasta Vessels and replacement parts shall be warranted for a period of one year from the date of original equipment installation. Keating replacement parts are warranted for a period of ninety days from the date of installation. Fryer & Pasta Vessels are warranted as described below.

## Fryer & Pasta Vessel Warranty

Fryers purchased after June 1, 1994 carry a prorated vessel warranty on defects in materials or workmanship to the Customer based on the following scale:

| *Time from Installation Date* | *Fryer Vessel Warranty Credit* |
|---|---|
| 13-60 months | 100% |
| 61-72 months | 80% |
| 73-84 months | 60% |
| 85-96 months | 40% |
| 97-108 months | 20% |
| 109-120 months | 10% |

The credit for the defective fryer & pasta vessel shall be applied against the cost of the replacement vessel, utilizing Keating's then current price, upon return of the vessel to Keating, freight to be paid by Keating, only during the first 60 months, subject to the limitations described below.

## Limitations Of Liability

In the event of warranty claim or otherwise, the sole obligation of Keating shall be the repair and/or replacement at the option of Keating of the product or component or part thereof. Such repair or replacement shall be at the expense of Keating except that the Customer shall pay the following expenses: all freight and labor expense for Keating replacement parts; for all other products, mileage exceeding 50 miles or travel more than one hour, labor costs of more than one person, overtime rates, truck charges, difference between ground and other mode of transportation, and holiday charges. Any repair or replacement under this Limited Warranty does not constitute an extension of the original warranty for any period for the product or for any component or part thereof. Parts to be replaced under this Limited Warranty will be repaired at the option of Keating with new or functionally operative parts. Keep Krisps and Computer Timers must be returned to Keating for warranty repair or replacement. Field repairs of those items are not authorized.

THE LIABILITY OF KEATING ON ANY CLAIM OF ANY KIND, INCLUDING CLAIMS BASED ON WARRANTY, EXPRESSED OR IMPLIED, CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORIES SHALL BE SOLELY AND EXCLUSIVELY THE REPAIR OR REPLACEMENT OF THE PRODUCT AS STATED HEREIN, AND SUCH LIABILITY SHALL NOT INCLUDE, AND CUSTOMER SPECIFICALLY RENOUNCES ANY RIGHTS TO RECOVER, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER INJURIES TO PERSONS OR DAMAGE TO PROPERTY, LOSS OF PROFITS OR ANTICIPATED PROFITS, OR LOSS OF USE OF THE PRODUCT.

If any oral statements have been made regarding the Keating products, such statements do not constitute warranties and are not part of the contract sale. This Limited Warranty constitutes the complete, final and exclusive statement with regard to warranties.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL, STATUTORY OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR WARRANTY AGAINST LATENT DEFECTS.

## Exclusions

The warranties provided by Keating of Chicago, Inc. do not apply in the following instances:

1. Defects arising out of or resulting from improper installation or maintenance, abuse, misuse, modification or alteration by unauthorized service personnel, or any other condition not attributable to a defect in material or workmanship. Proper installation and maintenance are the responsibility of the installer and Customer, respectively. Proper installation and maintenance procedures are prescribed by the Keating Service Manual.
2. In the event that the product was damaged after leaving the factory due to flood, fire, other acts of God or accident, damage during shipment should be reported to the carrier and is not the responsibility of Keating.
3. In the event the serial number or rating plate has been removed from the product or altered.
4. On parts which would normally be worn or replaced under normal conditions, including but not limited to electric bulbs, fuses, interior and exterior finishes, gaskets, radiants, sensors, etc.
5. With regard to adjustments and calibrations such as leveling, tightening of fasteners or plumbing connections, improper gas pressure or improper electrical supply, the checking of and changes in adjustment and calibrations are the responsibility of the installer. Proper installation procedures are prescribed by the Keating Service Manual.
6. In the event of unauthorized repairs or alterations to the Keating product.
7. With the use of sodium chloride in pasta vessels or harsh chemicals in fryer or pasta vessels.

## Other Terms and Conditions

The Customer must provide proof of purchase from Keating.

This Limited Warranty is valid in the 50 United States, its territories, and Canada, and is void elsewhere.

Keating products are sold for commercial use only. If any Keating product is sold as a component of another product or used as a consumer product, such Keating product is sold As Is without any warranty.

If any provision of this Limited Warranty is held to be unenforceable under the law of any jurisdiction, such provision shall be inapplicable in such jurisdiction, and the remainder of the warranty shall remain unaffected. Further in such event, the maximum exclusion or limitation allowable under applicable law shall be deemed substituted for the unenforceable provision.

This Limited Warranty shall be governed by and construed in accordance with the laws of the State of Illinois.

## To Secure Warranty Service

All repair services under this Limited Warranty must be authorized by Keating or performed at Keating. Authorization may be obtained by calling 1-800-KEATING within the Continental United States, Alaska, Hawaii, Puerto Rico and Canada during normal business hours (7:00 a.m. through 6:00 p.m. Central Time, Monday through Friday). When calling, please have the following information available: (1) name, address and telephone number of the Customer; (2) location of product, if different; (3) name, model number and serial number of the product; (4) installation date; and (5) description of defect. Keating will then issue a service authorization work order number to one of its approved independent servicing organizations, or request the product or part be shipped to Keating for repair or replacement, as appropriate. Any defective part subject to a claim under this Limited Warranty must be shipped freight prepaid to Keating for testing and examination. Keating's decision as to the cause and nature of any defect under this Limited Warranty shall be final.

## Keating

KEATING OF CHICAGO, INC., 1-800-KEATING WWW.KEATINGOFCHICAGO.COM

## SERVICE INFORMATION

If you have a service related question call 1-800-KEATING.
Please state the nature of the call; it will ensure speaking with the appropriate person.
Have your serial and model number available when ordering parts.


**KEATING OF CHICAGO, INC.**
Phone: (708) 544-6500  FAX: (708) 544-6505
Toll Free 1-800-KEATING (In U.S. and Canada)
www.keatingofchicago.com


***As continuous product improvement occurs, specifications may be changed without notice.**

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## KEATING LIMITED WARRANTY CARD

PLEASE COMPLETE AND MAIL AT ONCE–WARRANTY IS NOT IN EFFECT UNTIL CARD IS RETURNED

COMPANY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

DEALER: _____

DATE OF PURCHASE: _____ INVOICE NUMBER: _____

SERIAL NUMBER: _____ ❑ FRYER ❑ FILTER SYSTEM ❑ GRIDDLE

REMARKS: _____ ❑ TOP-SIDE COOKER ❑ HOT PLATE ❑ PASTA PLUS

I HAVE READ THE INSTALLATION AND OPERATION INSTRUCTIONS.

SIGNED: _____ DATE: _____

*Serving Those Who Serve The Very Best*